For Vista | Windows7 | Windows8

Technical Trading Tools
for Financial Markets

WinIT User Manual

For Vista | Windows7 | Windows8

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Insight Trading Pty Ltd

Congratulations on purchasing Insight Trader, the premier Australian designed package for market analysis and investment.

Insight Trading produces software specifically designed for the Australian stockmarket and futures markets. We know that your time is precious and we are therefore dedicated to providing you with the productivity tools you need to allow you to process very large amounts of information very efficiently.

Insight Trader has an internal database of the names and subsectors of every company on the Australian Securities Exchange (ASX). This allows you to view very quickly charts of all the banks, or all the gold stocks or all the chemical companies etc at the touch of a key. In fact, if you wish, you can see a chart on every company on the ASX in about one hour.

We are constantly upgrading the program by bringing out new versions with additional enhancements. These updates are conveniently and transparently updated via the web from a simple menu click and are available continuously throughout the year.

Support

For support on Insight Trader please contact Vestdata on one of the following:

1. By phone: (03) 9768 9611

   during normal business hours (9am-5pm weekdays)

2. By fax (03) 9796 2088 - at any time

3. By email: support@insighttrader.com.au - at any time.

4. At our Web site URL http://www.insighttrader.com.au

We will attempt to assist you as soon as possible.

Chapter 1

Getting Started.

Welcome to Insight Trader, the state-of-the-art Australian software package that harnesses the full power of the Windows Vista/Windows7/Windows8 32-bit or 64-bit operating systems to greatly enhance the productivity of your analysis of the investment markets.

This chapter tells you how to get Insight Trader operational as quickly as possible and provides a brief introduction on how to display and customise your charts.

Chapter 2 provides detailed instruction on constructing, modifying, manipulating, saving, retrieving and printing your charts.

Chapter 3 explains the use of indicators

Chapter 4 tells you how to customise your charts to access specialised facilities.

Chapter 5 teaches you how to use the advanced productivity techniques.

Chapter 6 allows you to configure the various program options to your taste.

Chapter 7 shows you how to maintain your database of price and volume information on the various securities that you follow.

Chapter 8 provides guidance on how to set up for various data downloading services

Chapter 9 explains the use and operation of the optional Systems Tester allowing you to trawl your database to identify those securities satisfying the technical and fundamental criteria that you have specified and to run profitability tests on individual securities according to your buy and sell rules.

Chapter 10 tells you how to use the Portfolio Manager to keep track of the transactions in the various portfolios of securities that you might hold and to value these now and at any previous point in history.

Chapter 11 outlines how to use the Insight Trader Documents Management System to store and retrieve all electronic documents related to your investment activities.

Insight Trader is both Powerful and Easy to Use

Insight Trader (or IT for short) is a state of the art technical analysis package designed for ease of use and speed of analysis for large amounts of data. It provides you with a wealth of features including:

- Eight different chart types
- Exceptional Point and Figure charting tools including auto box sizing, last price indication, relative strength and rebased relative strength.
- A library of important indicators. Stack up to 9 indicators under main price chart
- Ability to save up to 100 000 living chart arrangements under 10 separate categories.
- Each arrangement can consist of up to 506 charts displayed on screen simultaneously.
- An internal database of all the companies on the Australian Securities Exchange, their ASX GICS subsector and their main activities.
- Ability to manipulate your database according to the GICS industry sectors.
- Highlighter to flag exceptionally performing stocks
- Hard and soft stop loss alarms that can be dragged and set on screen with the mouse
- Provision for Managed Funds
- Wide range of drawing tools - trendlines, Fibonacci and Gann retracements, fans, time and price projections, cycles, astronomical events.
- Autorun a template chart arrangement on all stocks in any GICS subsectors as a slideshow
- Create a chart arrangement of all stocks on a highlight or reference list
- Fast access to commands using speedkey, toolbar buttons or menus.
- Rebased charts and Relative strength charts
- Black and white or colour printing of up to 12 or more charts per page.
- Generation of charts in enhanced metafile format for inclusion in word processing docs
- Update data via the internet or via fast manual bulk update
- Over 24 years of historical database of Australian and international markets.
- Document Management System for storage and retrieval of electronic documents
- Optional Portfolio Manager to keep track of the transactions and current and past values of all your portfolios.
- Chart equity curves and other performance indicators to benchmark your portfolio against index standards and automatically flag buy and sell transactions on your charts
- Optional Systems Tester to filter your database or run profitability tests according to both technical and fundamental criteria
- Optional Database Manager service, updated via the web, to automatically housekeep your ASX database including adjustments for splits, issues reconstructions, premium and capital returns, name changes updating of fundamental information – GICS sector, earnings per share, dividends per share, net asset backing, franking, shares on issue, market capitalisation, debt to equity and forthcoming dividend.
- Directly reads from Metastock®, BodhiOne and QuotesPlus® database formats.
- Keep your software updated via the web for the latest changes.

Five key components to Insight Trader:

There are five key components to the Insight Trader system:

1. Charting and analysis
2. Database management
3. Systems testing
4. Portfolio management
5. Documents management

Requirements

The minimum hardware and software requirements for IT for Windows are:

- IBM PC or compatible or Apple Mac running Fusion or Parallels
- Windows Vista/Windows7/Windows8
- 1 Gb of RAM
- 10 Gb of free hard disk space
- Microsoft compatible mouse
- Internet connection
- Graphics card with resolution of preferably 1280x1024 or higher

Summary of the Contents of this Manual

This manual is divided into the following chapters:

1. Getting started
2. Charting
3. Indicators
4. Specialised chart customisation
5. Advanced productivity techniques
6. Configuration
7. Management of data
8. Downloading data
9. Systems
10. Portfolio manager
11. Documents Management System

This Insight Trader manual is extensively illustrated with figures to facilitate your learning of the program as quickly as possible. Where it is important to show you actual screens we have included these directly. Where it is instead more important to discuss the principles behind the charts we have illustrated using charts printed from Insight Trader as these are of much higher quality than simple screen reproductions.

Installing Insight Trader

(Throughout this manual reference is frequently made to “directories”. It should be understood that “directory” and “folder” are different terms for the same entity)

We strongly suggest that you operate Insight Trader in 1280x1024 screen resolution or higher. Not all the toolbar buttons will be visible at the lower resolutions.

Installing from CD

Insert the CD into the CD drive and installation will start automatically. Follow the instructions on screen until the installation is complete.

Starting Insight Trader

When installation is complete you will have a separate Insight Trader group window with icons. Double click on the WinIT32 icon and a dialog box will appear asking you for your Initial Registration Number that has been supplied with this package. Type it in here and click OK. This initial registration number will allow you two months of operation during which time you should complete the enclosed licence agreement and return it to Insight Trading.

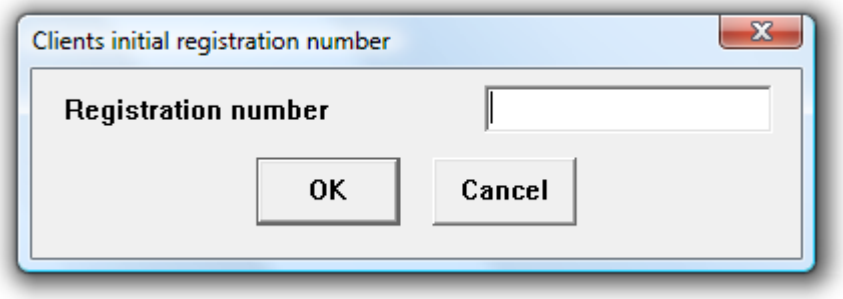


Fig 1.1

Keep this number recorded in a safe place (write it on the first page of your manual) as it can be used to give you two months of operation if you need to reinstall following a hard disk reformatting or changing to a new computer

After you have sent back a completed copy of this agreement you should run the program, select **Format/Update from web** and the process to enable your Final Registration Number will be initiated. If you are unable to finalise your final registration number in this way then you can call our office to carry out this operation manually.

For Insight Trader Databases

If you have a historical data CD you should install it by placing it in the drive, cancelling any attempt to autoinstall the program again unless you have not already done so, accessing **Utilities/Datacapture** from the main menu and click the first toolbar button and then click the **Historical Data Install** button.

For Metastock® Format Databases

From the main menu choose **Format/Preferences** and a form will appear. First check, and if necessary change, the settings which specify whether your database is in dollars or cents and the volumes in 1's 100's or 1000's. Then click the small button just to the right of the edit box labelled **Path for configuration and data files**. This will allow you to browse to locate the Metastock stem folder. This is the folder just below the ones containing the data files themselves. For example if your Metastock files are in alphabetic folders C:\MSDATA\ASX\A, B, …. Z you would browse to the ASX folder and accept that - so that the path now showing in the edit box will be C:\MSDATA\ASX then click OK to accept, OK to establish as and IT directory and OK to save configuration

For BodhiOne Format Databases

Install the Bodhi Freeway software as directed. Then from the main menu choose **Format/Preferences** and a form will appear. First check, and if necessary change, the settings which specify whether your database is in dollars or cents and the volumes in 1's 100's or 1000's. Then click the small button just to the right of the edit box labelled **Path for configuration and data files**. This will allow you to browse to locate the BodhiOne stem folder. This is the folder just below the ones containing the data files themselves. For example if your BodhiOne files are in alphabetic folders:

C:\My Databases\BodhiOne\ASX\A, B, …. Z

you would browse to the ASX folder and accept that - so that the path now showing in the edit box will be:

C:\My Databases\BodhiOne\ASX.

Then click OK to accept, OK to establish as and IT directory and OK to save configuration.

(Depending on the age of your specific installation you may instead need to log on to the folder:

C:\Data\BodhiOne\ASX)

For Quotes Plus Inc QP2® Databases

Install the Quotes Plus Inc QP2® software and the historical data as directed. From the main menu choose **Format/Preferences** and in the box labelled **Path for configuration and data files** enter **C:\IT-QP**. Click OK to accept, OK to establish as and IT directory and OK to save configuration

You are now ready to start charting.

Help in Insight Trader

There is an extensive help facility under the Help submenu of the main menu. This is in the form of the normal hypertext help of Windows programs.

In addition you can position the mouse cursor over any toolbar button and a brief explanation of its functionality will appear in a tooltip box or in the caption bar of the window in which it resides.

At any point in the program pressing F1 will cause a popup menu to appear giving the commands available at that point. In general there are three ways to activate the commands in IT:

- using the mouse on main menu items and toolbar buttons
- using speedkey commands or single keystrokes
- pressing F1 at various points in the program and selecting items from the resulting context sensitive popup menus that appear.

After you have used IT for a little while you will remember the various speedkey commands that provide the fastest way to move around the program.

All speedkeys available are tabled in the back of this manual and can also be displayed by pressing F1 while any chart is on screen. To remove this display press **ESC**. Note that this is the only F1 popup menu where the mouse will not activate the functions displayed because they refer to operations accessible only from other parts of the program.

Keeping your program up to date

Insight Trader is being constantly upgraded to produce new versions with additional enhancements. The latest version is also being constantly updated and these updates are available free and automatically over the internet with a simple click on the Spiderweb button on the main toolbar or from the main menu item Utilities/Update from web. Access this regularly to download any updates that might be available.

Date Convention Used in Insight Trader

Insight Trader has been extensively tested for Year 2000 compliance. However, for speed of data input there is an option for a two digit year representation for dates before the year 2020. For example a user would specify 251214 for Christmas Day in 2014 and 251200 for Christmas day 2000.

Depending on your preference for manual data input, you can either use the long date format 25122000 or the short date format as follows:

Date Representation

Long Date	Short Date	
25121890 25121899	2512Z0 2512Z9	The 1890's use Z for the decade
25121900 25121909	2512A0 2512A9	The 1900's use A for the decade
25121910 25121919	2512B0 2512B9	The 1910's use B for the decade
25121920 25121943	251220 251243	The dates 1920 to 2019 require the normal character for the decade
25121999 25122000 25122019	251299 251200 251219	
25122020 25122050	25122020 25122050	Between 2020 and 2050 the shortdate representation is equivalent to the long

Note that the ZAB characters will rarely if ever be utilised by most users

Insight Trader Special Edition - ITSE

Insight Trader Special Edition is a version of the program designed specifically for those users who do not require sophisticated charting functionality and is therefore ideally suited to fill the need for a fully functional standalone portfolio manager if this module has been included. It can also be used for scanning the market if the systems tester is purchased as an option but to get the most out of its capabilities full charting functionality is recommended.

ITSE charting is limited to linear bar charts or line charts and they cannot have constructions such as trendlines or indicators nor can they be saved. For this reason the second half of Chapter 1 and all of Chapters 2, 3, 4 and much of Chapter 5 are not applicable to ITSE. Chapters 9, 10 will be applicable where the specific optional module has been purchased.

If at any time you wish to upgrade your ITSE program to full charting capability it is only necessary to phone for a new registration number and the full power of Insight Trader charting can be enabled instantly.

How do I use IT

Downloading the data

The first step is to input the price and volume information for the securities that you are following. You can download end of day data via the internet directly from within IT by simply specifying the command line option for the software of the data service of your choice in one of the configuration dialogs. Alternatively, you can choose to input data manually yourself from the newspapers and we have provided a special utility to speed this process. Should you wish to chart intraday then you can access your data from a source such as Commsec that supplies snapshot data during the day.

Housekeeping the database

For those users downloading a large number of securities or the whole of the ASX, an ASX Database Manager subscription is available. This enables you to automatically perform the regular, and otherwise tedious, housekeeping chores on your ASX database to keep it properly organised following issues, splits, reconstructions, premium and capital returns, name changes and new listings and delistings. It will also insert the fundamental information such as DPS, EPS, NTA, franking, shares on issue, market capitalisation, debt to equity. You are also alerted to any forthcoming dividends. See Chapter 8 for more details.

Charting the data

Secondly you will want to view this data in the form of charts and analyse it utilising the powerful tools provided in the Insight Trader armoury. The basic philosophy behind technical analysis is that patterns in past price and volume activity provide a guide to future price performance.

Filtering the database

Thirdly you might wish to undertake a systems analysis of your database. You can construct "systems" consisting of sets of buy and sell criteria involving technical indicators such as moving averages, RSI etc together with fundamental criteria such as dividend yields, price earnings ratios and price to net asset backing. You may wish to get the program to trawl your database to identify all those securities currently satisfying the criteria that you have specified. Alternatively, you may wish to use these buy/sell criteria to run a profitability test on a single security over a period of historical data to see what profit you would have made had you traded according to these rules.

Keeping track of your transactions

Finally you will want to keep track of all the buy/sell transactions you make, the dividends you have received, charges and taxes to allow the Portfolio Manager to calculate the value of your portfolios now or at any time in the past, chart its equity curve and to monitor its profitability against specific benchmarks.

Storing your electronic documents for easy retrieval

You can easily store and automatically access files such as Word Processing and PDF documents, contract notes, bank statements, spreadsheet files, emails, shortcuts, links to webpages and image files of scanned paper documents. In fact you can store any type of file that you require.

Start simply

In the beginning you should not attempt to use all of the many tools available simultaneously. Instead, try to use the program in a basic way initially, gradually working your way into the more advanced features over a period of time as you accumulate experience.

Technical Analysis and Market Trading

Although this manual will introduce you to some of the basics of charting and technical analysis its main purpose is to show you how to operate the program. It is not intended as a course in charting and technical analysis. This information can be found in books such as those in the reading list at the end of the manual and is also available in courses given by specialist providers.

It is important to realise that market trading is a risky undertaking and that profits are not easy to generate consistently. Careless market trading, especially of futures, can quickly lead to personal financial ruin.

Strategies for market trading should include:

- Sound analysis of the markets
- Careful attention to good principles of risk and money management
- Self discipline and a realistic understanding of your own personal psychology.

There is a compelling argument that the final element may be the most important of the three.

IT is Easy to Use

To start WinIT from the Insight Trader Group Window, double click the WinIT32 icon. Alternatively click the Start button, then Programs, then Insight Trader group and then WinIT32. The program will load and you will be presented with a message box asking you to consent to the terms of the licence agreement. Press “Y” to accept and you are now ready to go.

To exit Insight Trader at any time you can use the standard windows procedures of clicking either File/Exit from the menu, the Exit toolbar button or the X in the top right hand corner of the screen.

What follows in the remainder of this chapter is an introductory tutorial to help familiarise you with the most common operations in the program. Later chapters examine these aspects in greater detail as well as describe some of the more advanced features of the software.

Screen Layout

The first thing you will notice is the menu at the top with the main toolbar just below. Underneath the toolbar is a large blank rectangular area where your charts will appear and can be managed. Each button in the toolbar represents a commonly used function in the menu and provides direct access to that function with a single click of the mouse.

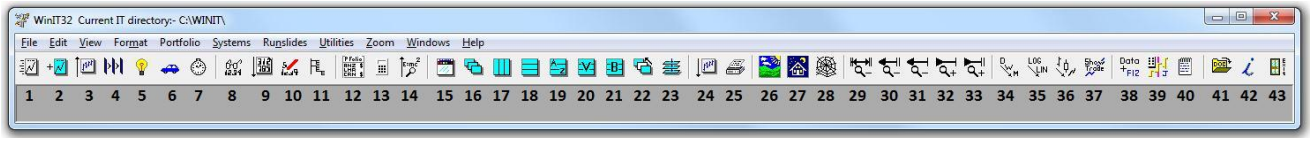

WinIT32 Current IT directory:- C:\WINIT\
File Edit View Format Portfolio Systems Runslides Utilities Zoom Windows Help
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43

Fig 1.2

The diagram above shows each toolbar button numbered. The function of each button so designated is indicated below. This key should be used as a general reference guide for the manual but does not need to be examined in detail now.

1 - Quick chart current security	2 - Add new chart	3 - Replay saved charts
4 - Slideshow of saved charts	5 - List highlights	6 - Autorun highlights
7 - Time constants	8 - View data records	9 - Save data file
10 - Data mgt Load/erase/merge	11 - New directory	12 - Load Portfolio
13 - Risk Calculator	14 - Load system	15 - Blank screen
16 - Cascade charts	17 - Vertical tile	18 – Horizontal tile
19 - Arrange alphabetical	20 - Arrange by Velocity	21 - Arrange by Behaviour
22 - Activate next chart	23 - Overlay charts	24 – Save charts arrangement
25 – Print arrangement of charts	26 – Convert Today file	27 – Datacapture
28 – Spider Web update	29 – Zoom out full range	30 – Zoom out fully RH edge
31 – Zoom out from RH	32 – Zoom in to RH edge	33 – Zoom fully in toRH edge
34 – D/W/M rotate	35 – Log/linear toggle	36 – Bar/Candle/Line rotate
37 – Show Pfolio trades & data	38 – Data for last bar	39 – Scroll data box
40 – Notepad Alarms Fundmntals	41 – Document store	42 – Help
43 – Xit Insight Trader		

You can remove any main toolbar button (except the Exit button) that you do not require by holding down the Shift and Control keys and then clicking that button. You can restore all buttons to the toolbar by holding down the Shift and Control keys and then clicking the Exit toolbar button. Buttons so removed will remain hidden even when the program is restarted.

Utilities available

Under the Help menu you will gain easy access to a Calculator and Notepad to assist your work if these are options you have installed with your Windows operating system. From the Utilities menu you have available amongst other things a COMMAND prompt.

In addition to these there are under the **Utilities** menu three user configurable options - **First user file**, **Second user file and Third user file -** that activate the batch files 1YOURS, 2YOURS and 3YOURS which users can set up for their own purposes.

Keep both your software and the Database Manager updated for the latest changes via the Web by clicking the Spiderweb toolbar button or choosing **Utilities/Update from web**.

Lets Chart

This section has been designed to briefly introduce you to the more common operations in the program. More detailed explanations of these and other functions will be given in later chapters.

When WinIT starts up it loads a security file known as the default file. You can set this to be whatever you like but the factory setting is **CSL**.

Just pass the mouse cursor over the first button from the left on the toolbar and in a little window beside the cursor you will see **Quick chart current security**. Now move the cursor over the other buttons on the toolbar and you will see a short description of each of their functions. Go back to the first button and give it a single click with the left mouse button. A window will appear on screen with a weekly bar chart of CSL, the default file currently loaded. Now place the mouse cursor over the bottom RH corner of the chart and drag it down and to the right before releasing it. The chart will be stretched to a larger size. Then drag its title bar to move the whole chart to a different position on the screen.

If you click on the maximise button (centre button on the top right hand corner of the window) the chart will fill the working area. If clicked again this button will cause the chart to be restored to its original position.

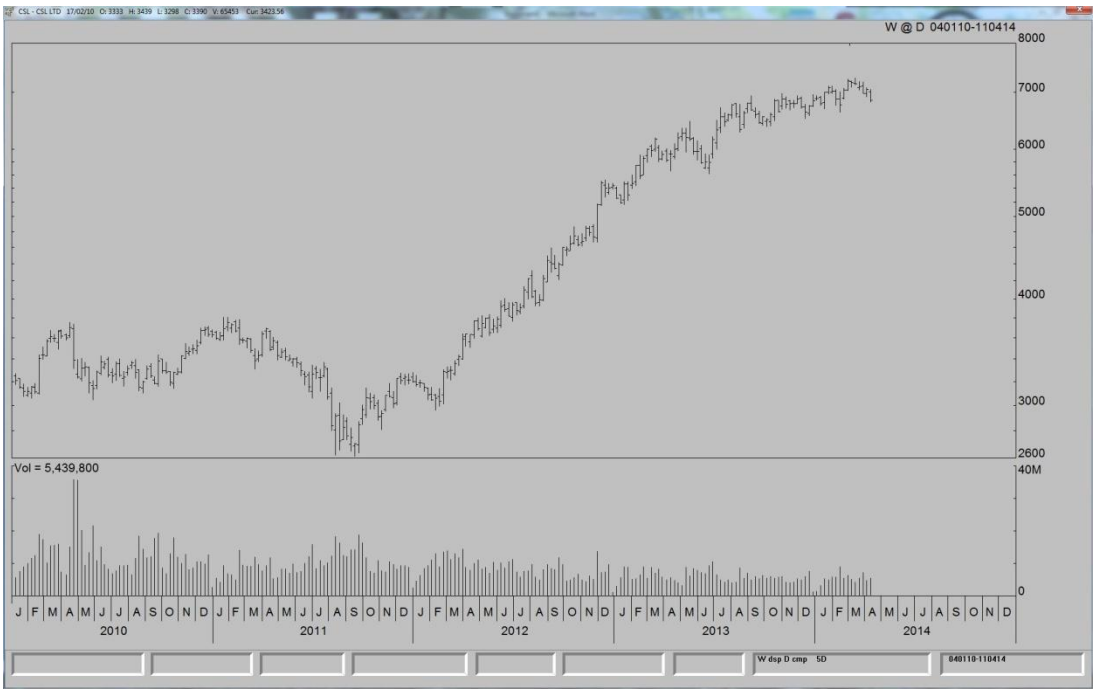


Fig 1.3

If at any stage you accidentally click the left mouse button on the chart proper the screen will change to "chart edit mode" (to be explained later) filling the screen completely as shown above. To exit from chart edit mode click x at the top right hand corner of the window.

In Chart Edit mode if you place the cursor over any bar it will display in the window's caption bar the position of the cursor as well as the open, high, low, close and volume values for that date.

The Floating Toolbar

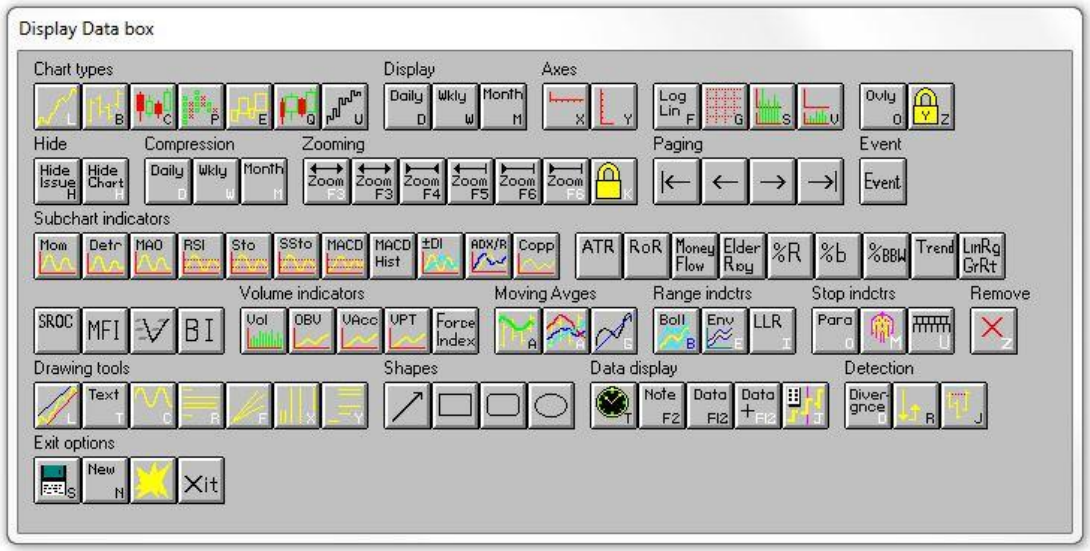


Fig 1.4

Next place the mouse cursor over the chart itself and press the right mouse button. A second toolbar, the floating toolbar, will then appear which can be dragged by its titlebar anywhere on the screen. The various buttons are grouped under functional headings.

Again placing the mouse cursor over any button will indicate its function but now in the titlebar of the toolbar. Click on the third button of *Chart types* and the toolbar will disappear and the chart will change to candlesticks. To bring the toolbar back just click the right mouse button when the cursor is over the chart. You could change this back to a bar chart by pressing the second button of *Chart types*. However, we will use speedkeys instead so for now press the **Splat** button (third button of *Exit options*) to remove the toolbar without performing any other function. **Right Clicking** anywhere on the grey area of the toolbar will have the same effect as the **Splat** button.

The functionality of 15 of the most commonly used floating toolbar buttons has also been provided on buttons 29-40 of the main toolbar.

Speedkeys

Press the **B** key on the keyboard and the chart will return to its original bar chart display. Press **C** and it will go back to candlesticks. A menu of these speedkeys can be accessed at any time by pressing the **F1** key. Try this now. A list of speed keys will appear which are also tabled in the back of this manual. You will see **B** - bar chart and **C** - candlesticks the two speed keys we have just used. The **ESC** key will remove the list of speedkeys.

So you can access the same functions via menus, toolbar buttons or speedkeys. Speedkeys are practical and generally the fastest but will take a little more time to learn. Therefore most experienced users employ speedkeys where available in combination with the mouse for other operations.

Again place the mouse cursor over the chart and press the right mouse button to bring the floating toolbar back again. Click the second button of *Volume indicators* to add the **OBV** indicator to the subchart of the window. Bring the floating toolbar back once more and click

the fourth button of *Subchart indicators* to select **RSI** for the subchart and we will add RSI to the subchart after accepting the default time constant.

To remove any indicator from the subchart simply position the mouse cursor opposite the indicator to be removed in the right hand margin of the chart (to the right of the vertical price axis) and click the right mouse button.

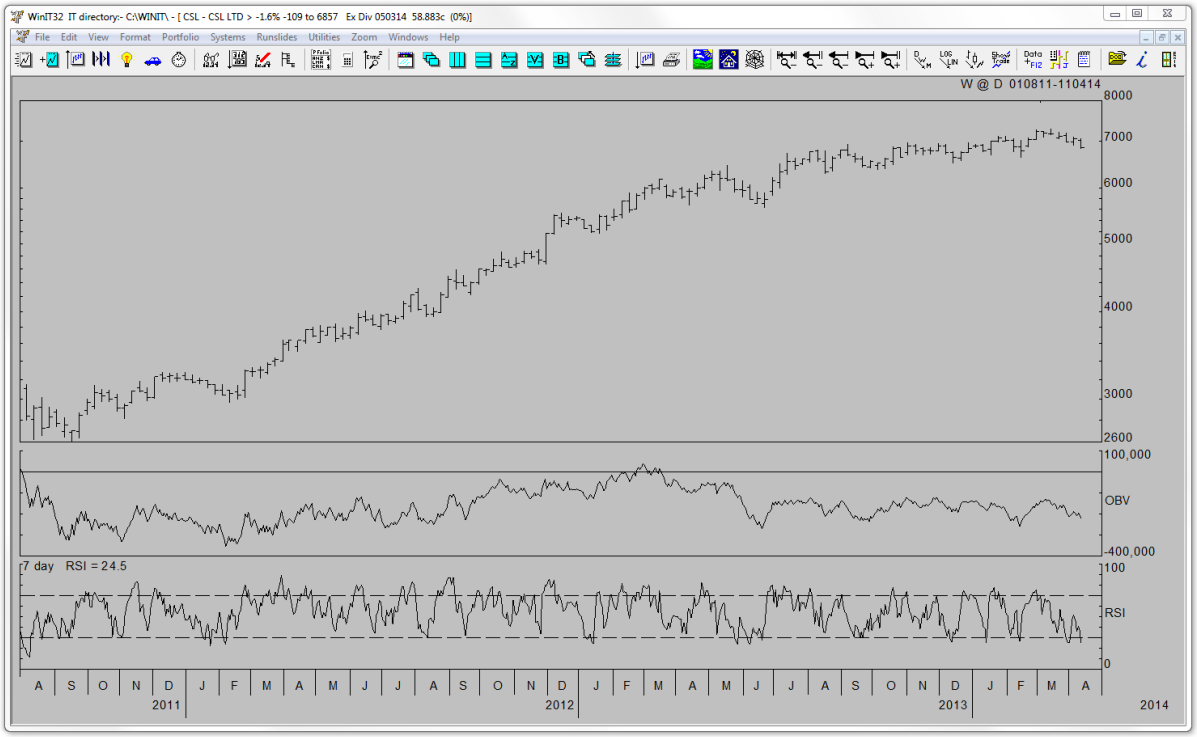


Fig 1.5

Bring the floating toolbar back yet again and click the sixth button **V** of *Axes* to toggle the subchart and all its indicators off. Then from the floating toolbar again choose the first button **Vol** of *Volume indicators* to add volume to the subchart so again have our bar chart with volume.

To change the time display of the chart press **M** for monthly and the chart will change to a monthly display. Press **W** and it will change back to weekly. Press **F6** to zoom in and **F6** again to zoom further in. Pressing **F5** will allow you to zoom back out. There are many ways to zoom the charts which we will explore in detail later.

Press **G** key to toggle a grid on and off your chart or use button **4** of *Axes* on the floating toolbar

Press **F** key to toggle between logarithmic and linear axes on your chart or use button **3** of *Axes* on the floating toolbar or button 36 of the main toolbar.

Displaying the data for any day

If you press **Ctrl J** (or click button 5 of *Data display* on the floating toolbar or button 39 of the main toolbar) you will enter the chart edit window (to be discussed in the next section) and a vertical cursor and data box will allow you to see the prices for any day by moving the mouse around to the desired date. The price level of the arrow cursor is also shown in the caption bar of the data window. **Ctrl J** will toggle you out again back to the front screen or just **Right Click** on the mouse.

The Chart Edit Window

Now click on the chart itself with the left mouse button and the chart will expand to fill the whole screen with a status bar below.

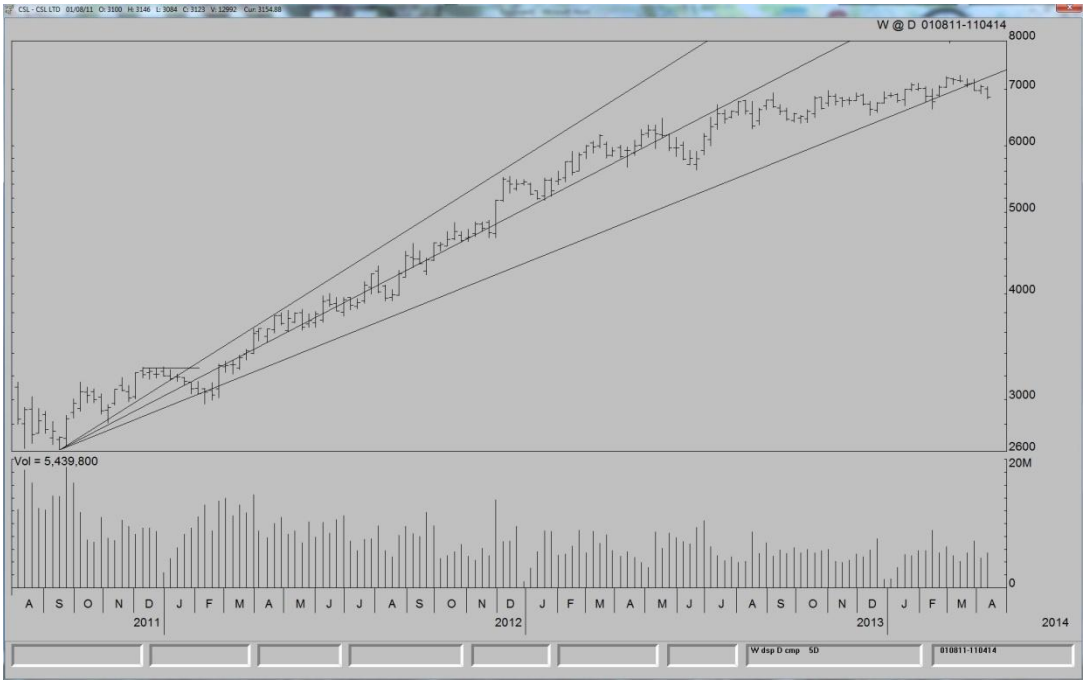


Fig 1.6

This is called the chart edit window as it allows you to draw trendlines and other structures such as cycles and text with maximum accuracy. Click on the right mouse button and the same toolbar will reappear with all these *Drawing tools* grouped together. The function of each button so designated is indicated below. This key, listing the various functions available, should be used as a general reference guide for the manual but does not need to be examined in detail now.

Remember, placing the mouse cursor over any button on the floating toolbar will indicate its function in the titlebar of the toolbar.

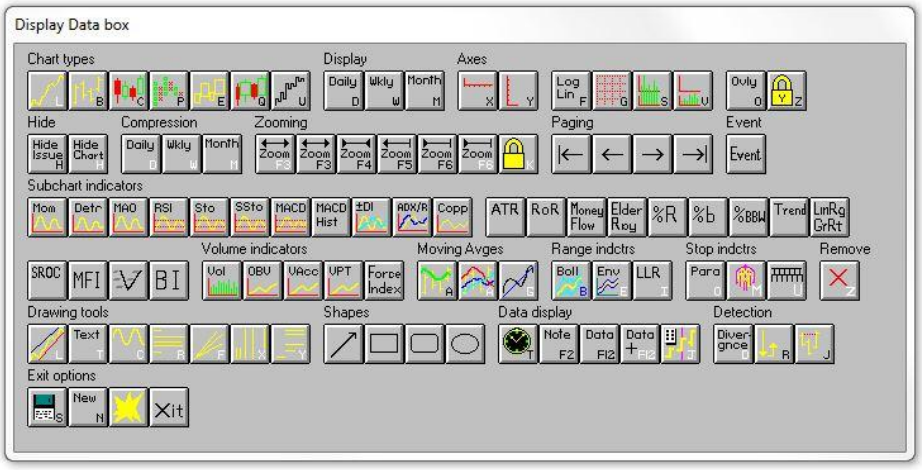


Fig 1.7

Chart Types

1 – Line chart
2 – Bar chart
3 – Candlesticks
4 – Point and figure
5 – Equivolume
6 – Equicandles
7 – Gann Swing

Display

1 – Daily
2 – Weekly
3 – Monthly

Axes

1 – Reset X scales
2 – Reset Y scales
3 – Log/linear
4 – Grids
5 – Log/linear Vol
6 – Subchart
7 – Overlay
8 – Lock Y scales

Hide

1 – Hide issue/splits line
2 – Hide chart

Compression

1 – Daily compression
2 – Weekly compression
3 – Monthly compression

Zooming

1 – Full Zoom out
2 – Zoom out
3 – Zoom in
4 – Zoom out lock right
5 – Zoom in locked right
6 – Zoom last few days
7 – Lock dly wkly mthly

Paging

1 – Page to beginning
2 – Page left
3 – Page right
4 – Page to end

Event

1 – Event

Subchart Indicators

1 – Momemtum
2 – Detrend
3 – Movg avge oscillator
4 – RSI
5 – Stochastic
6 – Slow stochastic
7 – MACD
8 – MACDhistogram
9 – DMI +/-DI ADX
10 – ADX/ADXR
11 – Coppock
12 – Average True Range
13 – Rate of Return
14 – Money Flow
15 – Elder Ray
16 – Williams %R
17 – Bollinger %b
18 – Bollgr Band width
19 – Trend
20 – LRGR
21 – SROC
22 – Money Flow Index
23 – Velocity
24 – Behaviour Index

Volume Indicators

1 – Volume
2 – On balance volume
3 – Volume accumulatn
4 –Volume/price trend
5 – Force Index

Moving Averages

1 – Single Moving Avge
2 – Multple Moving Avs
3 – Regression line

Range Indicators

1 – Bollinger bands
2 – Mov Av envelope
3 – Line Linear Regrssn

Stop Indicators

1 – Parabolic SAR
2 – Chandelier Exit
3 – Scaffold Exit

Remove

1 – Remove main chart indicator

Drawing Tools

1 – Lines
2 – Text
3 – Cycles
4 – Fib/Gann Retrace
5 – Fib/Gann fans
6 – Fib time projections
7 – Fib price projections

Shapes

1 – Arrow
2 – Rectangle
3 – Round rectangle
4 – Ellipse

Data Display

1 – Time constants
2 – Notes for security
3 – Display data box
4 – Extended databox
5 – Moving Databox

Detection

1 – Divergence
2 – Reversals
3 – Pivot points

Exit Options

1 – Save edited chart
2 – New security
3 – Remove toolbar
4 – Exit chart editing

Creating Structures such as Lines, Fans etc

Move the cursor to button **5** of *Drawing tools* - **Fibonacci/Gann fans**. Click it with the left mouse button then select Fibonacci in the dialog box that appears.

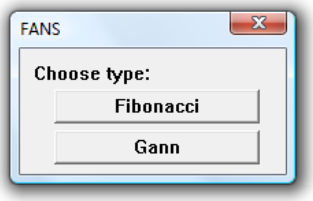


Fig 1.8

Position the mouse cursor at the starting point for the fan and click the left mouse button. Move the cursor to the right and locate the second point for the fan and click the left mouse button again. You can then move the cursor away to leave the fan in position. However, it can still be moved by dragging its reference points. Dragging involves holding down the left mouse button while moving the mouse to a different position.

Now bring the mouse cursor back near the first or second point and drag it to position it more accurately. Both reference points can be repositioned in this way. To drag the whole structure bodily, position the mouse cursor to a point more or less midway between the two reference points and drag. The whole fan will move bodily.

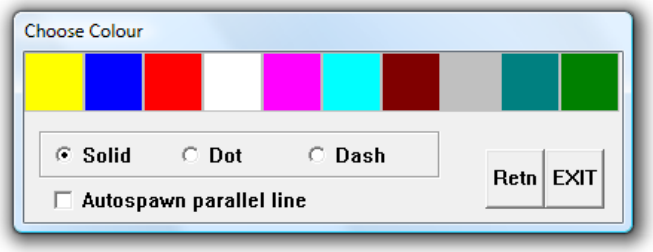


Fig 1.9

After positioning the fan to where you want it to be click the right mouse button to bring up the Choose colour dialog box. First select whether you want the line to be solid, dotted or

dashed and then click on a colour for the fan. This will set a copy of the fan in the current position.

Now press the right mouse button to retrieve the floating toolbar and click the **Save** button (first button of *Exit options*). You will be returned to the main screen and the chart of CSL in the window will be updated with the fan that we have just constructed.

Try this same operation again but selecting Lines mode (first button of *Drawing tools*) to allow you to draw trendlines instead of fans.

Adding Charts to the Working Area

To add another chart in a separate window to the working area, click on the second button from the left on the main toolbar "Add new chart" and a dialog box will appear. (Pressing the speedkey +/= achieves the same result.) Click on the **Select** button and the box on the right will display all the files in the directory. Select one by clicking on it and press **OK**. A second chart will appear in its own window in the working area. Keep adding charts in this way until you have a total of 6 on the screen. Then press the close button to close the dialog box.

Charts added in this way inherit the characteristics of the currently active chart - displaying the same chart type and indicators etc as the original.

Cascading and Tiling

To see how you can arrange these quickly, click on the **Cascade** button on the main toolbar. Then try the **Vertical tile** button, the **Horizontal tile** button and finally the **Arrange charts alphabetically** button. You will see immediately the effects of these different ways to arrange your charts. Below is an example of four tiled charts. Fig 2.15 in the next chapter shows charts cascaded.

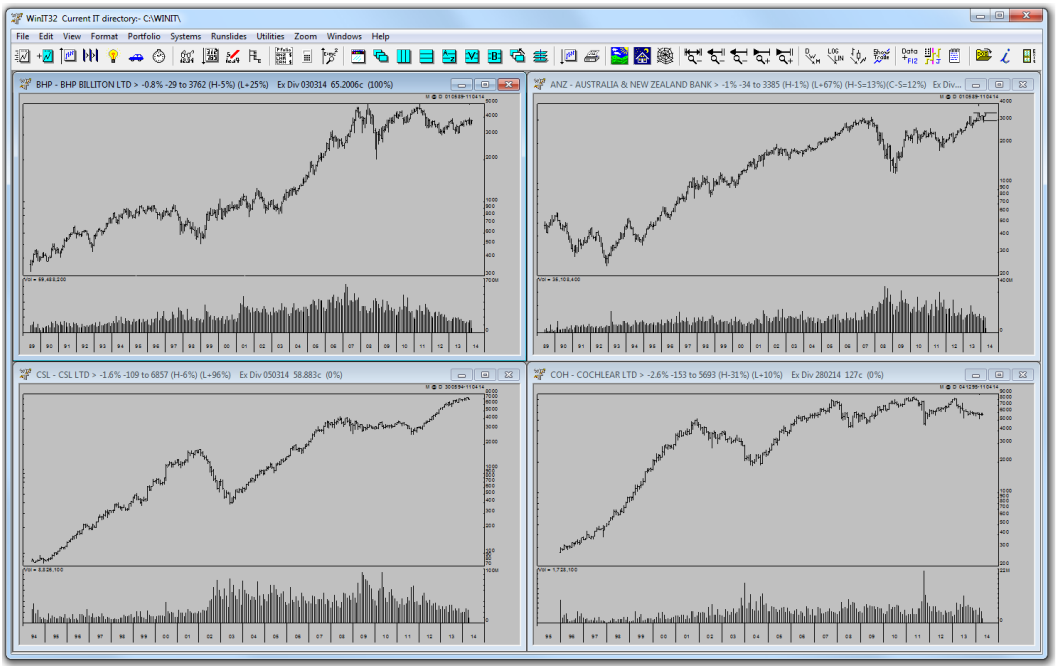

WinIT32 Current IT directory:- C:\WINIT\
File Edit View Format Portfolio Systems Runslides Utilities Zoom Windows Help
BHP - BHP BILLITON LTD > -0.8% -29 to 3762 (H-5%) (L+25%) Ex Div 030314 65.2006c (100%)
ANZ - AUSTRALIA & NEW ZEALAND BANK > -1% -34 to 3385 (H-1%) (L+67%) (H-S=13%)(C-S=12%) Ex Div...
CSL - CSL LTD > -1.6% -109 to 6857 (H-6%) (L+96%) Ex Div 050314 58.883c (0%)
COH - COCHLEAR LTD > -2.6% -153 to 5693 (H-31%) (L+10%) Ex Div 280214 127c (0%)

Fig 1.10

Saving the Chart Arrangement

The arrangement of charts on the screen can easily be saved to disk for later retrieval. Simply click on the **Save Arrangement** button, button 24 on the main toolbar, and you will be asked to type a descriptive title for the arrangement. Type "**Test charts**" in the edit box and press **OK**.

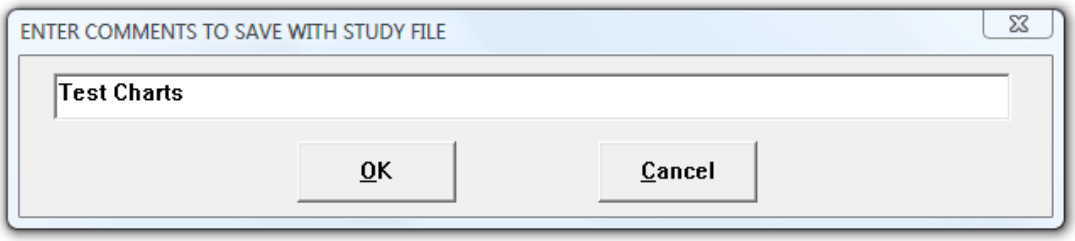


Fig 1.11

That chart arrangement is now saved for posterity. Press the **Blank screen** button on the toolbar to clear all of your charts from the working area and you are again starting with a clean slate. To retrieve the arrangement that you have just saved click the third button from the left on the main toolbar **Replay saved charts** and a dialog box will appear with a number of titles of saved arrangements. If you see your title there "**Test charts**" double click on it and your six charts will be restored just as you saved them. If you do not see your title just start typing the first few letters of "**Test charts**" into the edit box immediately above the list and your title will spring into view from where you can double click on it.

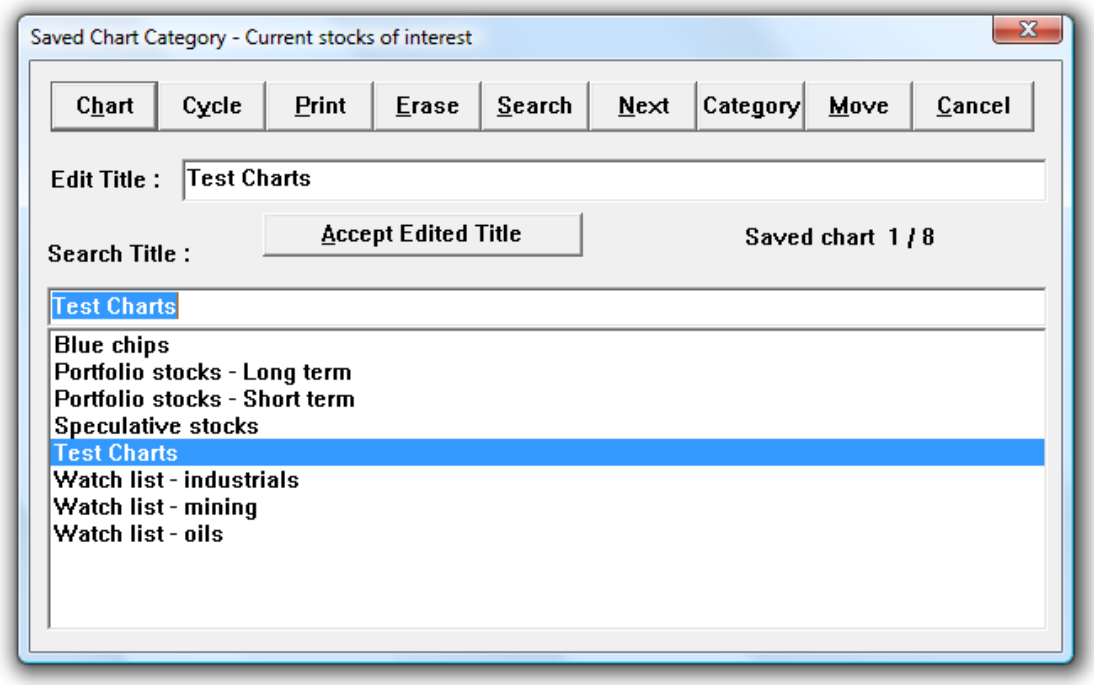


Fig 1.12

Changing the Active Chart

At any one time a specific chart known as the "**active chart**" will have "**the focus**" ie its title bar will be highlighted. Look at your chart arrangement now to determine the one that is active. If you click on the **Windows** submenu of the main menu you will see the list of chart titles at the bottom of the submenu. One of these is ticked and you will notice that it is the same one as your active chart.

Clicking on any one of these titles in the menu list will highlight that window and make it active, bringing it on top if it is overlapped by other windows. Alternatively, clicking on the title bar of any actual chart window will achieve the same objective. Pressing the left or right arrow keys or clicking on the **Next chart activate** button 22 on the main toolbar will activate each chart in turn.

Maximising Charts and Activating in Sequence

If you click on the **maximise** button of any chart, ie the central button in the group of three at the top right hand corner of its window, it will cause the chart to fill the whole working area of the screen covering all the other charts. Then press the **left arrow** or **right arrow** keys to cause each of the other charts to be maximised in turn. The **Activate next chart** button 22 on the main toolbar will perform the same function as the right arrow key. Now press the restore button on the same line as the main menu to restore the maximised chart to its original position.

The active chart at any time can also be maximised or restored to its unmaximised position by pressing the **up arrow** and **down arrow** keys respectively or by clicking the centre button in the top right hand corner of the window containing the chart.

Refreshing Charts

Pressing ENTER from the front screen will refresh all charts in the current arrangement and update them with any data such as additions to the database as well as transferring any global formatting such as hiding or revealing detailed data and extending or reducing alarm lines.

Printing Chart Arrangements

If you wish to print the arrangement of charts select the **Print arrangement** button on the main toolbar. Do not print charts whose windows are overlapped (unless one of them is maximised) as the result will not be satisfactory. Before printing your charts you are given the opportunity to enter a caption which will appear at the bottom of the printed chart and then you are asked to specify whether you require portrait or landscape orientation. Remember to press the **Apply** button before exiting this dialog box to ensure that your changes are properly established.

Quick Template

The menu item **View/Quick Template** allows you to instantaneously pull up the first saved chart arrangement in the current category. The speedkey for this is **Alt+Q**. If you have created a favourite template as a saved chart, or say a chart arrangement of all your portfolio securities, then you can access this immediately via **Alt+Q** at any time. It will not alter the position of the cursor in your list of saved charts. Make sure that this template/chart arrangement always remains in the first position, say, by adding a couple of spaces in front of its title.

Exiting Insight Trader

There are many ways to exit Insight Trader. Click on button 43 of the main toolbar, choose **File/Exit** from the main menu, press the speedkey **Alt X**, click the **x** button in the top right hand corner of the main Insight Trader session window or press **Alt F4.**

Summary

Congratulations! You now have a basic understanding of how to construct charts of different types, size their windows, add indicators, draw lines, arrange many charts on the screen, save and retrieve these arrangements, change the active chart, maximise charts and print an arrangement of your charts to your printer.

You are now ready to start serious work.

Chapter 2

Charting

Overview

What is a chart

Charting is a technique for displaying numerical data in a visual format that allows a much more rapid and insightful interpretation of its significance than is possible with say just a table of numbers. Charts are the basis of technical analysis. This overview section describes what functionality is available in the program. A later section will detail the operations required to achieve the various effects.

Charts can be:

- Created from scratch using custom settings specified by the user
- Created from an existing template of settings
- Saved to disk as a single chart or as a screen arrangement of several (up to 506) charts together
- Retrieved or replayed from disk if previously saved with all original settings and constructions but updated with any new data
- Subjected to various techniques of technical analysis
- Overlaid on one another
- Run as a slideshow (i) of saved charts or (ii) using a chart template on a list of securities
- Printed with large numbers of charts per page

What types of Charts can I Use

There are eight basic chart types in Insight Trader:

1. Line charts
2. Bar charts
3. Candlestick charts
4. Point and figure charts
5. Equivolume charts
6. Equicandle charts
7. Gann swing charts
8. Scatter diagrams

These will now be discussed in detail.

Chart Types

Bar Chart

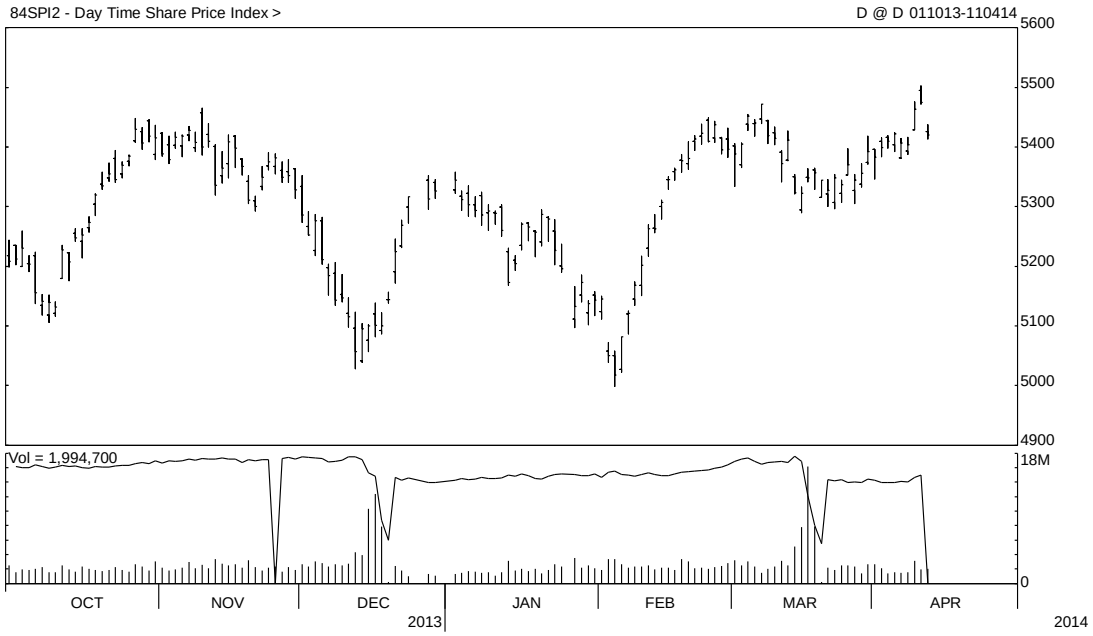


Fig 2.1

A bar chart consists of a main price chart and a volume subchart. It is displayed in the form of separate vertical bars, one for each time period say monthly. Fig 2.1 shows a daily bar chart for the SPI (Share Price Index futures). In the upper price chart you will notice a tick to the left and a tick to the right of each bar. The top of each bar represents the high price for the day, the bottom the low price, the tick to the left is the opening price for the day and the tick to the right is the closing price.

In the subchart there is a simple vertical bar, the height of which represents the volume or the number of securities traded on that day. For commodity futures markets such as the SPI where open interest is available (ie the number of contracts currently open) a line plot of this open interest is displayed going from the left to the right overlaying volume.

Bar charts for weekly and monthly periods are also frequently used.

Coloured bar charts are the same as normal bar charts except that bars that close higher than they open are coloured differently (say green) from bars that close lower than they open (say red) in a similar way to candlesticks.

Line Chart

A line chart is a chart where individual prices (usually the close) for each day are joined with a single line. This type of chart is simple and filters out the intraday volatility to give cleaner presentation of the data.

ANZ - AUSTRALIA & NEW ZEALAND BANK >
D @ D 040111-110414
3600
3400
3200
3000
2800
2600
2400
2200
2000
1800
Vol = 3,945,200
50M
0
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
2011
2012
2013
2014

Fig 2.2

Line charts are also used for relative strength and rebased displays. A line chart format must be used for the regression analysis.

Candlestick chart

This chart type is based on a Japanese technique that is hundreds of years old and is called candlesticks because of the similarity of its elements to the outline of a candle with a wick at either end.

Fig 2.3 is an example of a daily candlestick chart.

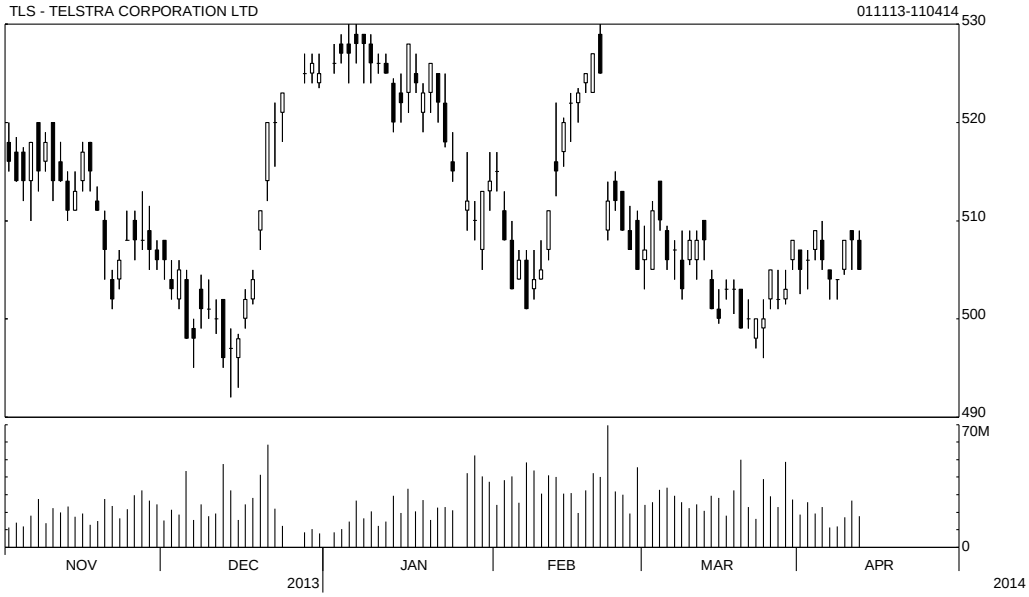


Fig 2.3

A candlestick chart provides a much more visually graphic representation of the price action of a security than the usual bar chart to which it is related. A candle replaces the bar where the top and bottom of the body of the candle is determined by the opening and closing prices and the wick at either end (referred to as the shadow) by the high and low prices of the day.

If the closing price of the day is above the opening price (ie it is an upday) then the body of the candle is an unfilled rectangle bounded at the top by the high and at the bottom by the low. If the closing price is below the opening (ie it is a down day) then the rectangle is filled (usually black or red). Candles and patterns of candles are given quaint names and have associated technical implications.

Point and Figure Charts

Point and figure charts provide a way of filtering out lower level fluctuations in prices to reveal the main price movements. With this type of chart there is no consideration of volume or of time and the chart is constructed purely from price movements.

The chart consists of columns of X's and O's (or squares). As prices move up to a given level then additional X's are added to the existing column of X's up to that price level. If the price reverses by a preset amount then O's are plotted in the next column down to the lowest price reached.

A “boxsize” or price increment for each X or O must be set before the chart is drawn. Also the number of boxes (usually 1 or 3) required to establish a reversal and start a new column in the opposite direction must be preset.

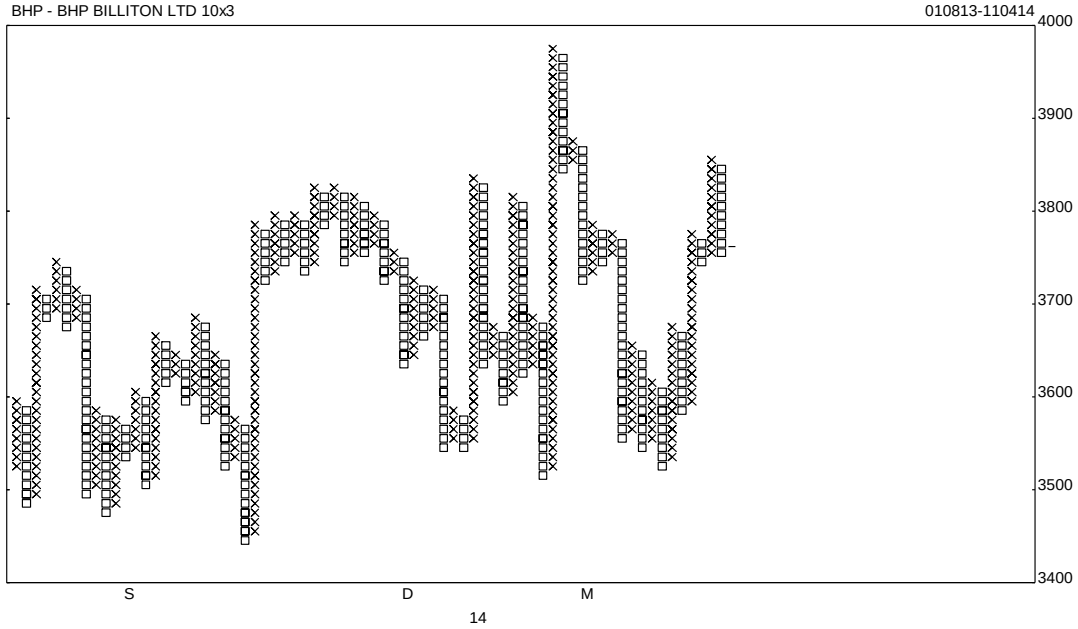


Fig 2.4

A point and figure chart of more than 1 box reversal cannot have both X’s and O’s in the one column but a single box reversal chart can. It is important to understand that a new X or O can only be added if the price moves by a full box above or below the last box plotted.

Since it is the high price and the low price for the day from which the chart is constructed there is no way of seeing from the chart where the last closing price is. Insight Trader has overcome this problem by placing a small horizontal tick just to the right of the last column indicating the level of the last close.

Since choosing an appropriate box size for a given security is something of an art, Insight Trader allows you to specify an automatic box size and the program will choose this value for you. The value supplied should be regarded as a starting guide only which the user may need to refine later.

Although time as such is not used in the construction of this type of chart the times corresponding to the various boxes that are plotted are indicated along the horizontal axis.

Although the normal point and figure calculation is based on high and low prices for the day, if high and low are not available then point and figure will be calculated on the close or any other set of values you might specify. If you wish you can force the chart to use close only, even if the high and the low are available.

Also point and figure charts can be drawn using relative strength close, rebased close, rebased relative strength close, high, low or open. (Rebasing and relative strength charts are discussed later in this chapter.

Equivolume Charts

Like point and figure charts equivolume charts do not have a time axis but they are constructed as a series of rectangles lying side by side. The top of each rectangle is the high price for the day, the bottom of the rectangle is the low price for the day and the width of each rectangle is proportional to the volume for the day. Equivolume is a way of looking at price changes as a function of the cumulative number of securities traded and does provide a novel way of looking at the market. Weekly and monthly equivolume charts are also used.

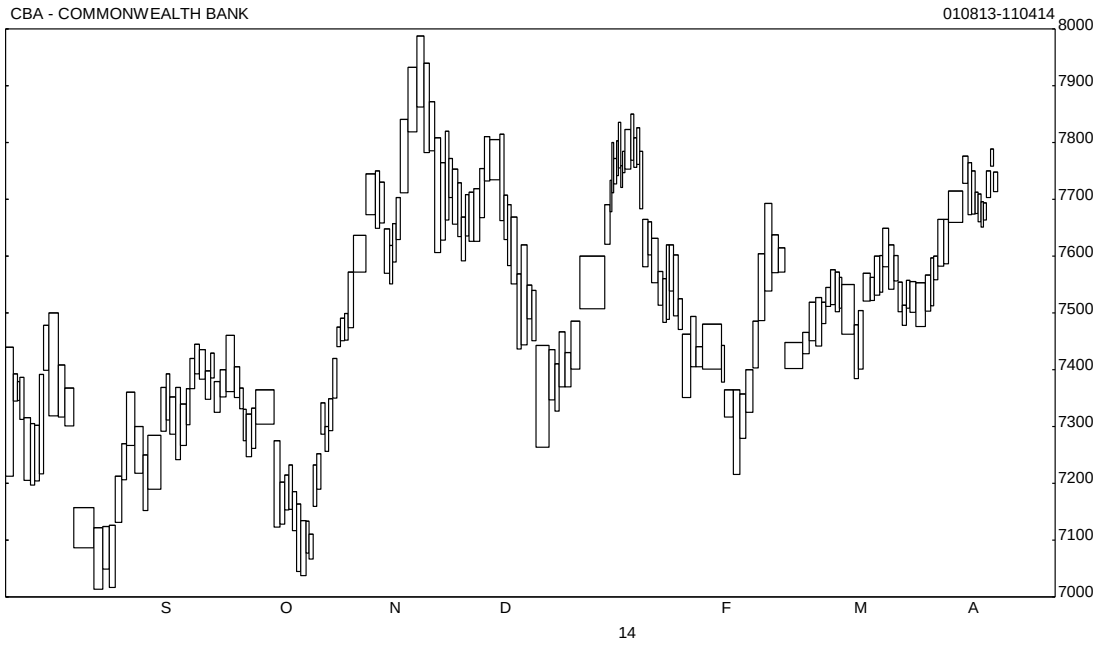


Fig 2.5

Equicandle Charts

Equicandle charts are very closely related to equivolume charts where the thickness of the candle body is proportional to the volume traded for that period. However, in place of the high/low rectangle we have a candle with its corresponding body and shadow.

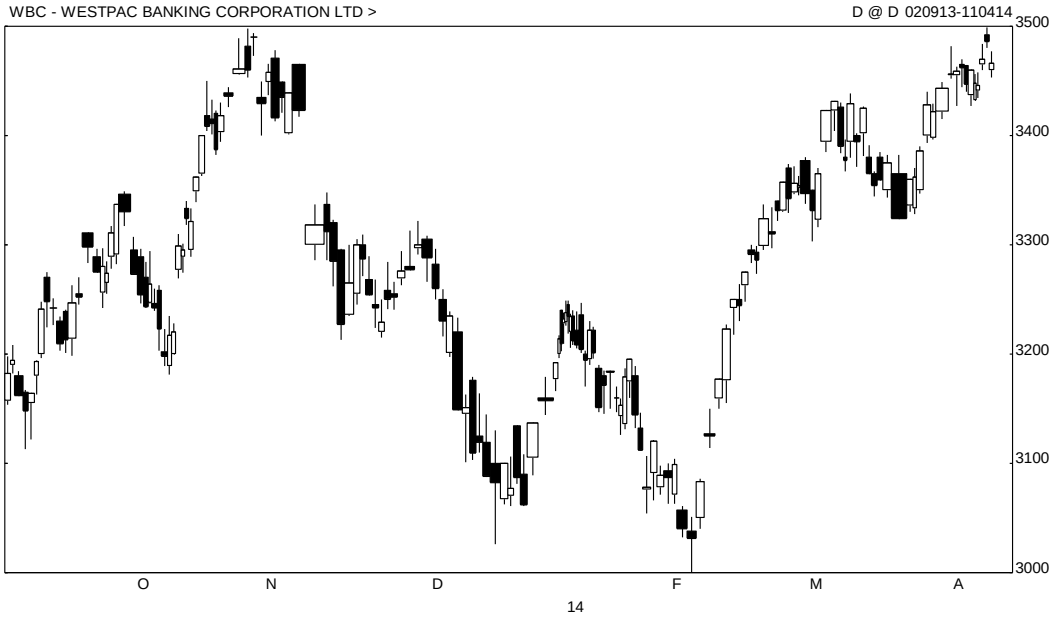


Fig 2.6

Gann Swing Charts

Gann swing charts like point and figure charts are a technique for filtering out “noise” so that only the major movements are indicated. Swing charts can be based on time swings, price swings or a combination of both time and price. Time swings can be specified as one or more periods while the price filter can be specified in either absolute price units or % price units. For a time swing chart the prevailing swing is reversed if the price moves in a direction against it for the specified number of time units. For a price swing chart the prevailing swing is reversed if the price moves in a direction against it by at least the number of price units or the %price specified.

Inside days and outside days require specific consideration and there are several different ways of treating these situations.

Depending on the amount of data to be plotted the chart will be either the rectangular display as shown below or the alternative sawtooth representation.

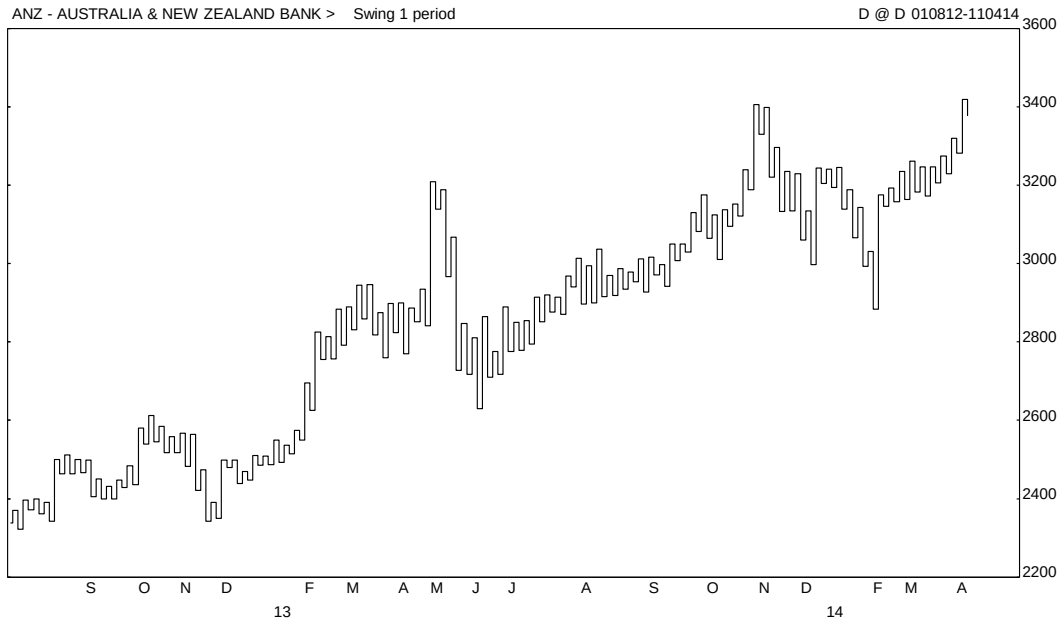


Fig 2.7

Scatter Diagrams

Instead of a chart of lines joining data points a scatter diagram is a chart of data points each individually marked by a cross, square, triangle, plus asterisk or even a vertical histogram bar. This produces a scatter of points on the screen and hence the name scatter diagram. Unlike bar and candlestick charts, a scatter diagram or even a line chart is not restricted to having the horizontal axis as time. The chart below shows a scatter diagram of the gold price as a function of the silver price over a given period of time.

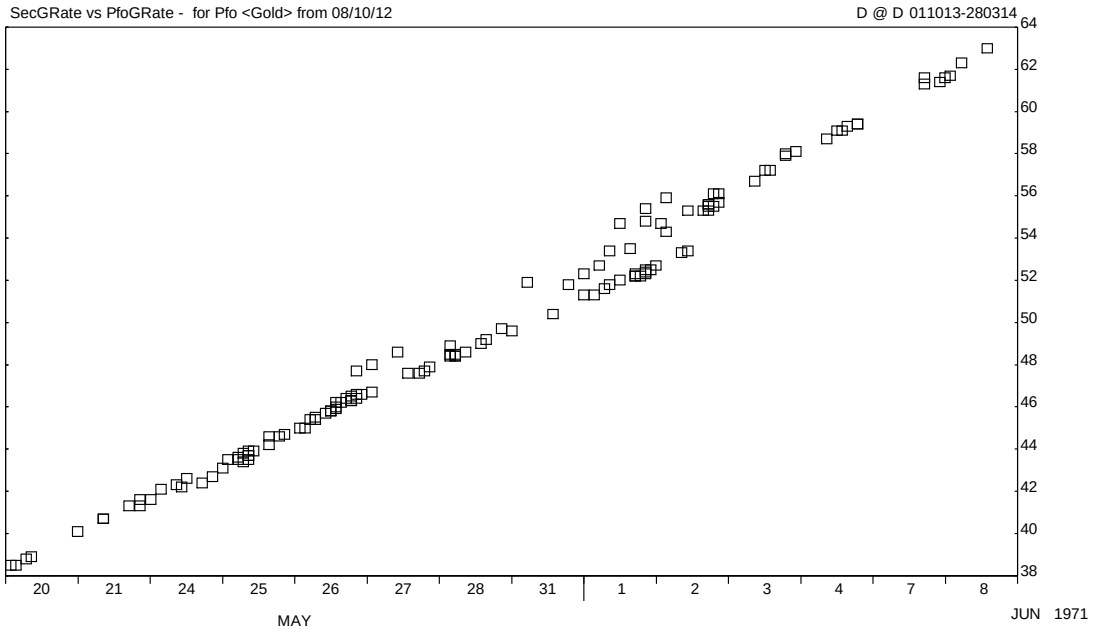


Fig 2.8

Other Display Options

Although the above seven chart types are the basic formats in which data is displayed there are two additional options for displaying data in line and point and figure charts that should be mentioned now.

Relative Strength

A relative strength chart is simply a plot of the ratio of the closes of one security to those of an index or even another security for each date in a range. This ratio value can be plotted in the form of either line chart or a point and figure chart.

Fig 2.9

Relative strength is most often used to assess the strength of a particular security relative to the broad market index eg the All Ordinaries Index or a subsector index eg the Banking Index.

Rebased Charts

Charts can be rebased or rescaled such that they all commence from the value of 100. This makes it very easy to compare relative performance of one stock with another as they both start off from the same point on the left hand side of the chart. Subsequent individual price action will generally cause them to diverge. It is common to overlay two or more of these charts on the one screen to allow direct comparison of their performances.

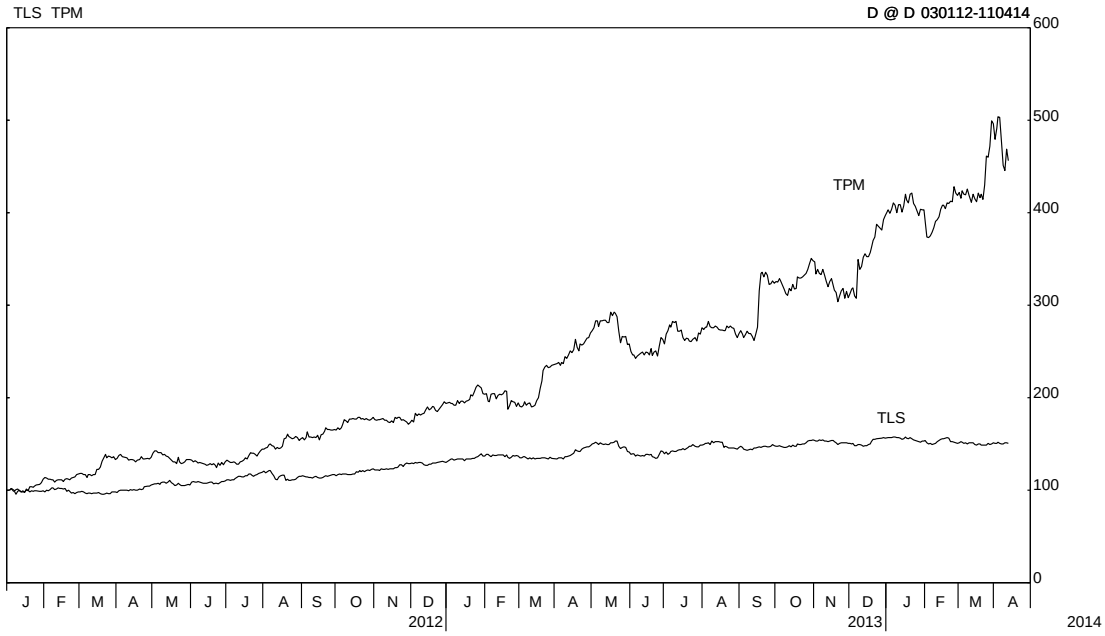


Fig 2.10

It is possible to combine both relative strength and rebasing to get a rebased relative strength chart. Like relative strength, rebasing can be displayed on either a line chart or a point and figure chart.

Scales

Logarithmic and Linear Axes

The displays shown so far have utilised what is known as a linear vertical axis where the distance representing a given price increment, say 1 cent, remains constant over the whole chart. However, there is another type of scaling called logarithmic where the distance representing a given price increment reduces as the total value increases. A valuable characteristic of logarithmic axes is that a given vertical distance on the chart from any particular price level represents a fixed proportion of that price.

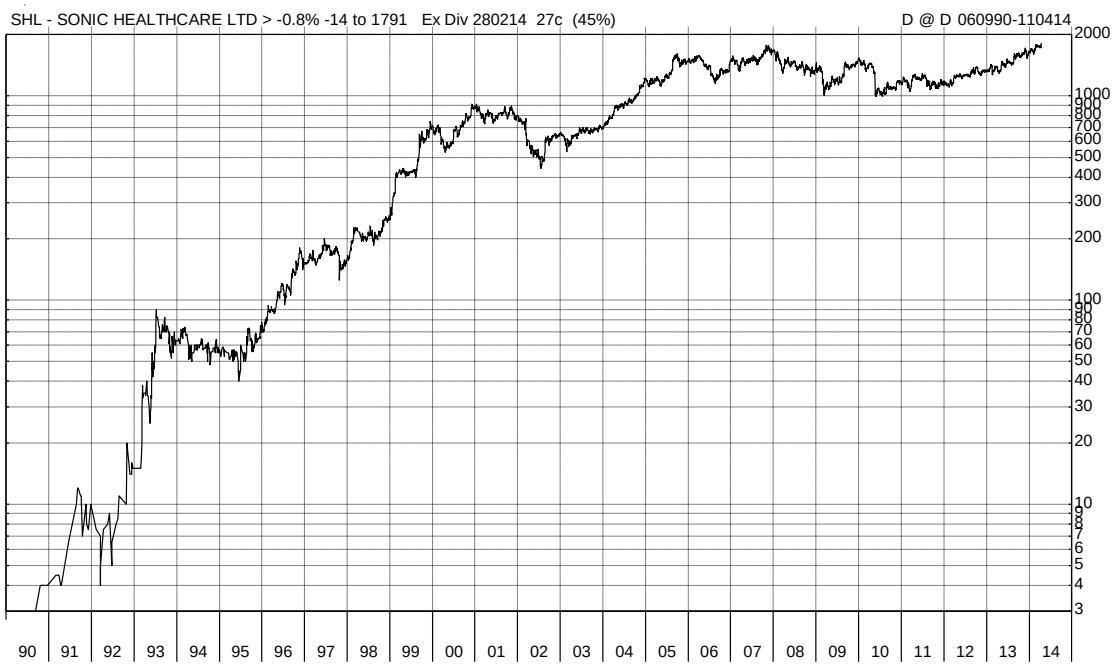


Fig 2.11

For example a doubling of the price from 10 cents to 20 cents will occupy the same distance as a doubling in price from 20 cents to 40 cents or from 40 cents to 80 cents and so on. This is a very convenient way of viewing securities whose price varies over a wide range or when viewing long term charts where the decrease in the value of money amongst other things causes a progressive and exponential increase in the price of a security or index.

All chart types except point and figure can be displayed as logarithmic. Line charts and scatter diagrams can have the horizontal axis as well as the vertical axis logarithmic.

Grids

Horizontal and vertical grids as shown in Fig 2.11 can be toggled on or off the charts.

Daily, Weekly and Monthly Displays

Bar, candlestick, equivolume and equicandle charts can be displayed as daily, weekly, or monthly from a file of daily data. The information for each of these periods is accumulated during the charting process and plotted as a single object eg bar, candle, rectangle etc. However, the underlying file remains as a daily file and any indicators such as RSI or moving averages will be calculated as daily indicators even though the bar chart displays as monthly or weekly.

Should you wish you can actually compress the file in memory to weekly or monthly and any indicators and any indicators will now be calculated on the basis of the compression state eg weekly or monthly.

Zooming

When any chart is displayed it is possible to zoom in and out to include less or more data as required. You can zoom out to cover as much as one century on the horizontal axis or zoom in to include as little as one day. Several techniques can be employed to zoom your charts.

Automatic and Fixed Scaling

Scaling on the horizontal and vertical axes can be left free to adjust automatically to encompass the data you are attempting to plot or you can specify fixed limits for both axes. In addition to this you can set up a "running time window" to show for example the last 100 days. If this chart is saved and retrieved at any later date it will continue to show the last 100 days from the date it is retrieved. Should you wish to do so you can also set "white space" on the right hand side of the chart to allow room for projecting trendlines etc.

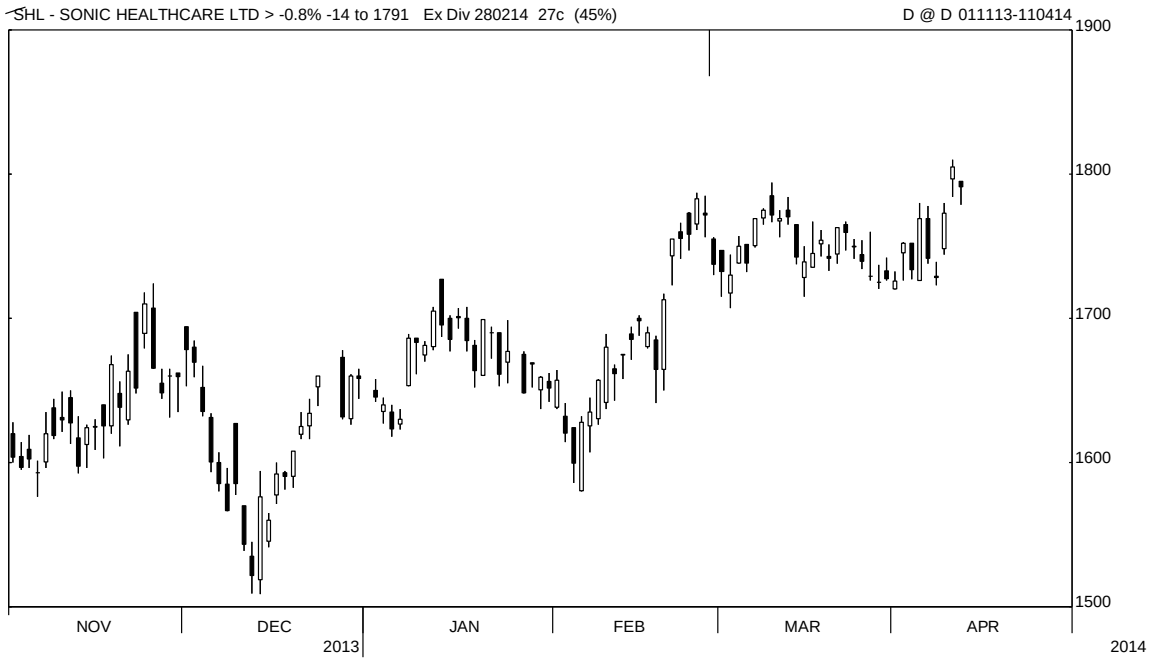


Fig 2.12

Presentation of Charts

The charts described above can be presented to the user in several ways.

Single Charts and Multiple Chart Arrangements

A chart can be shown as a single chart in one window on the screen or as one of a group of several (up to 506 - each in its own separate window) charts together on the one screen.

Overlaid Charts

Any charts which have been constructed in windows on the same screen can be overlaid on one another. Only the scaling applicable to the first chart will be shown and subsequent charts will be automatically assigned distinguishing colours.

Viewing Charts

Each chart or arrangement of charts can be viewed as a standalone static display or as part of a moving slideshow of many chart arrangements viewed consecutively. Such slideshows can provide a very time efficient way to view and assess large amounts of data in a relatively short time.

Replay Slideshow

The first type of slideshow is the replay slideshow where saved charts are displayed automatically, one after the other with a set time delay separating them of between one and twenty seconds. This gives you the opportunity to view and assess saved charts presented in many different formats. Each of the chart arrangements can display many different securities on the one screen.

The Chart Arrangement Slideshow

Another manually operated form of slideshow is to place all charts, up to a maximum of 506 on a single screen as a chart arrangement. By maximising one of these charts you can then at leisure manually page through the rest with each individual chart being maximised in sequence.

Autorun Slideshow

Alternatively you may wish to view a large number of individual securities but displayed using a fixed template chart arrangement. Although this template can show many charts on the one screen all such charts will be charts of the same security. It is therefore important to choose a template where the individual charts, if there are more than one, will show different aspects of the same security eg a long term candlestick chart, a short term candlestick chart, point and figure and a chart containing indicators might be suitable.

For this type of slideshow you need to specify a reference list of the securities that you wish to display. This reference list can be constructed manually in a word processor or can be generated automatically a number of ways from within the program. For example the highlight list generated during downloading of daily data is often used as a reference list for an autorun.

During the autorun the template will display a chart arrangement for the first security on the list. After the specified time separation the second security on the list is displayed using the same template and so on. If at any time you wish to tag a security for closer examination later you can hit a key while it is displayed and it will be appended to a short list known as the tag list. The list itself can be used later as a reference list for another autorun using the same or another template.

It is even possible to automatically generate saved charts during an autorun should you so wish merely by indicating that the next autorun will save the charts automatically.

Saving and Retrieving Charts

Charts constructed on screen can be saved to disk for later retrieval with all original settings, indicators, trendlines etc intact except that the charts will be updated with additional information that may have been entered into the database.

It is actually chart arrangements, consisting of 1 to 506 windows that are saved to disk. There are 10 separate categories into which you can save your chart arrangements and each category can contain up to 10 000 arrangements. Since each arrangement can be 506 separate charts, the maximum number of individual charts that can be saved is therefore 50 600 000.

Such saved arrangements can be retrieved at any time for inspection and possible modification before resaving these modifications to disk.

Refreshing Charts

Pressing ENTER from the front screen will refresh all charts in the current arrangement and update them with any data such as additions to the database as well as transferring any global formatting such as hiding or revealing detailed data and extending or reducing alarm lines.

Printing Charts

Chart arrangements can be printed in black and white or colour to any printer supported by Microsoft Windows. The resolution of printed charts can be extremely high, much higher than displayed on screen. For this reason it is possible to usefully print up to 20 charts per A4 page.

You can also produce enhanced metafiles of charts to import into your wordprocessor documents. These are vector pictures that can be stretched and shrunk to enable you to position and size your charts in these documents without loss of resolution.

Viewing Latest Data and Using the Notepad

Latest Data

While a chart is displayed you can access a small window which will detail the latest data for that security. For a normal security it will show the open, high, low, close, volume and open interest, change and turnover as well as the derived fundamental information such as Dividend Yield, Price Earnings Ratio, Price to Net Asset Backing, Franking and other fundamental data provided the raw information such as DPS, EPS, NAB and Franking have been entered into the Notepad for that security.

The Notepad

Every security file has an associated Notepad, accessible from the chart, into which you can enter your freeform notes on that security as well as the raw fundamental information above. You can also set alarms from within this Notepad to audibly alert you when the price has fallen below or risen above your stop levels. The price levels of any alarms set are shown on the charts.

Data Window

In addition to these you can access a small window from the Chart Edit screen which will display data from past dates as a cursor is moved along the chart.

The Undo Facility

There is an undo facility that will allow you to reverse the last 100 changes that you have made on the current chart. You can actually move backwards and forwards through the sequence of screen changes that have occurred since you last switched to that window.

Managing your charts

This section will detail the specific operations required to perform the various functions outlined in the previous section of this chapter. Let us first learn to create and manipulate the charts we will be using.

Creating and Manipulating Charts

Quickchart Current File

When Insight Trader first opens it automatically loads a security file called the default security file. This is factory preset to be CSL but it can be changed to be any other security, from **Format** at the main menu as will be described in a later chapter.

The quickest way to create a chart is to click once on the first button on the main toolbar **Quick chart current file.** A window will appear with a bar chart of the default file CSL. Pressing this toolbar button is equivalent to clicking **View** on the main menu and then clicking the first item on the submenu **Kwickchart**. This is an example of how toolbar buttons are identical to menu items but quicker to use. The equivalent speedkey for this operation is **Alt C**

If you press this button again you will see that it does not cause another window to appear but will merely redraw the chart in the current window. The only time that it adds another window is if there are currently none in the working area. If there is more than one window, Kwickchart redraws the chart in the window that is currently active - ie the one with the highlighted title bar.

Chart New Security in the Active Window

If you wish to see another security in the same window simply press the **N** key (**N** for New) and a dialog box will appear requesting you to enter its code. Type in ANZ and click OK or hit ENTER. This is the easiest way to change the security in the active window. Another way to achieve the same thing is to take the mouse cursor to the active window and click the right button to bring up the floating toolbar.

If you then click on the third last button on the bottom row of buttons on the floating toolbar **New security**, then you will get the same dialog box as before requesting you to input the required code. It is not necessary for you to know the actual ASX code of the security because if you type in the name or part of the name eg ‘WESTPAC, but precede it with an apostrophe, it will find the code for you.

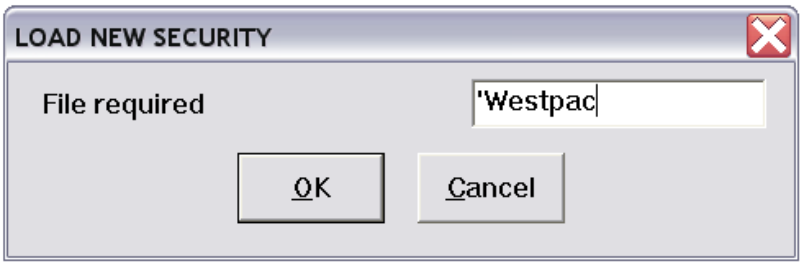


Fig 2.13

Add a New Chart in a New Window

Instead of replacing the chart in the active window you may wish to add another window to your working area with its own new chart.

A simple way of doing this is to click the second button on the main toolbar **Add new chart** or press the speedkeys **Alt L** or the **+/=** key and the following dialog box will appear. If you know the code of your new security then just type in say NAB in the left edit box and hit ENTER or click OK. If you do not know its code then type in its name or part of its name in the second edit box (but do not include an apostrophe in this case) and click Select.

The program will then search for all codes matching the name and will tabulate these in a list below with the security code, name and main activity. These can be sorted on any column simply by clicking on the column heading.

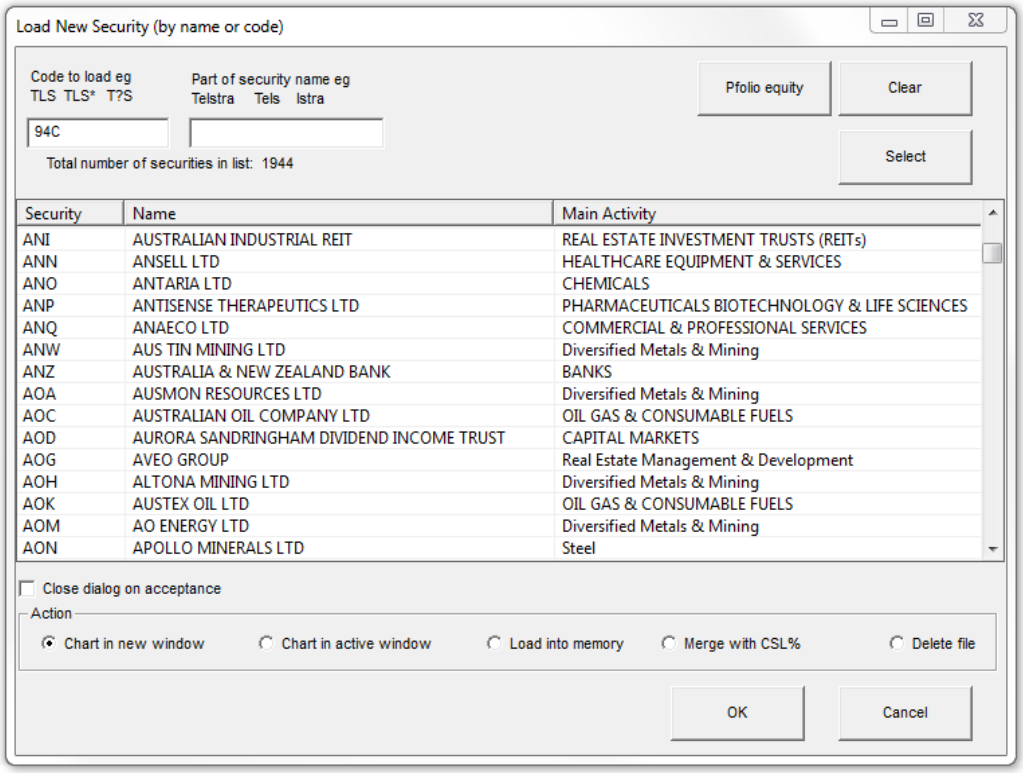

Load New Security (by name or code)
Code to load eg
TLS TLS* T?S
Part of security name eg
Telstra Tels Istra
Pfolio equity
Clear
94C
Total number of securities in list: 1944
Select
Security
Name
Main Activity
ANI AUSTRALIAN INDUSTRIAL REIT REAL ESTATE INVESTMENT TRUSTS (REITs)
ANN ANSELL LTD HEALTHCARE EQUIPMENT & SERVICES
ANO ANTARIA LTD CHEMICALS
ANP ANTISENSE THERAPEUTICS LTD PHARMACEUTICALS BIOTECHNOLOGY & LIFE SCIENCES
ANQ ANAECO LTD COMMERCIAL & PROFESSIONAL SERVICES
ANW AUS TIN MINING LTD Diversified Metals & Mining
ANZ AUSTRALIA & NEW ZEALAND BANK BANKS
AOA AUSMON RESOURCES LTD Diversified Metals & Mining
AOC AUSTRALIAN OIL COMPANY LTD OIL GAS & CONSUMABLE FUELS
AOD AURORA SANDRINGHAM DIVIDEND INCOME TRUST CAPITAL MARKETS
AOG AVEO GROUP Real Estate Management & Development
AOH ALTONA MINING LTD Diversified Metals & Mining
AOK AUSTEX OIL LTD OIL GAS & CONSUMABLE FUELS
AOM AO ENERGY LTD Diversified Metals & Mining
AON APOLLO MINERALS LTD Steel
Close dialog on acceptance
Action
Chart in new window
Chart in active window
Load into memory
Merge with CSL%
Delete file
OK
Cancel

Fig 2.14

Double click the required one and your security will be loaded into memory and charted in its own new window inheriting the same format and settings of the chart in the previous active window.

Alternatively if you are sure that the part of the security name that you have typed in will uniquely select the security that you want then simply hit Enter or click **OK** (rather than Select) and the security will be immediately charted.

Note that after the security has been charted the dialog box will disappear. Should you instead wish the dialog box to remain after charting the first security to allow you to select more from the list simply uncheck the box **Close dialog on acceptance**. This option will then become your default for subsequent sessions.

This dialog box is resizable and can be made narrower by dragging its right hand edge to the left so as to display only the codes. When charting multiple selected codes the box can then be repositioned out of the way on one side of the screen from where you can scroll and double click on codes you wish to chart.

You will have noticed that on the dialog box above that there are five **Action** radio buttons. If the first one is selected your security will chart in its own new window. If the second one is selected then a new window would not have been created and the new security would have been charted in the active window replacing the existing one. The third one will load the file into memory without charting it. The fourth one will merge the new file with the currently loaded one while the fifth one will delete the file from disk.

If you wish to see and choose from all securities in the directory then leave the two edit boxes at the top of the dialog box empty and click **Select**. The list box will then fill with all the codes in the directory. Select the one you want, by scrolling to it if necessary, and click on it to highlight it then click **OK** (or simply double click it) to load it. The **Code to load** and **Security name** edit boxes can be cleared using the mouse on the **Clear** button to the right.

Had you instead wished to see only those codes starting with B (or BHP) then type B* (or BHP*) in the **Code to load** edit box, click **Select** and the table below it will display all the codes commencing with B (or BHP). Double click the one you want to load**.**

This second toolbar button from the left is equivalent to selecting **View** from the main menu and then clicking the item **Load security to chart.** However, perhaps the quickest way to add charts is to use the speedkey **+/=.** This is the = key on the main keyboard which when shifted gives +. Hit this key, type in your code or part of the security name, and then hit **ENTER.** Repeat this process for as many codes as you want and windows will continue to be added to the working area with charts of the chosen securities formatted according to the original settings.

Charts added in this way inherit the characteristics of the last active chart on screen including chart type, moving averages, indicators and rebasing or relative strength modes.

Substituting a new security in an arrangement of charts

If you have an arrangement of charts displayed in the working area, for example say six different chart types with indicators of ANZ and you wish to see this same arrangement of chart types and indicators but for NAB then all you need to do is press **Ctrl N** and type in the dialog box that appears the code of the new security NAB (or if you have forgotten its code then an apostrophe and its name: 'National Australia Bank.) This will then substitute the security NAB for ANZ in all the charts appearing on screen.

If any of your charts are ratios or relative strength plots eg ANZ\XAO then the new security will be substituted in the numerator position of the ratio.

Adding a Portfolio Equity Curve

To obtain a list of files for all available portfolio equity curves click the button "Pfolio equity" on the "Add new chart" dialog box to allow you to quickly select a list of available portfolio equity curve files to chart then double click your choice.

Deleting Charts from the Working Area

Any chart in the working area may be deleted by clicking the **x** button in the top right hand corner of its window.

All charts may be cleared from the working area by clicking button 15 on the main toolbar **Clear screen.** This is equivalent to selecting **Windows** from the main menu and clicking the **Blank screen** item. The speedkey **Alt B** also blanks the screen.

Arranging Charts on Screen

Buttons 16-19 on the main toolbar allow you to arrange your multiple charts according to four standard options. **Cascade charts, Vertical tile**, **Horizontal tile, Arrange charts alphabetically** will rapidly rearrange your charts to show them respectively overlapped on one another to expose their title bars, tiled vertically, tiled horizontally or tiled horizontally and arranged alphabetically according to ticker code. This can also be done from **Windows** in the main menu.

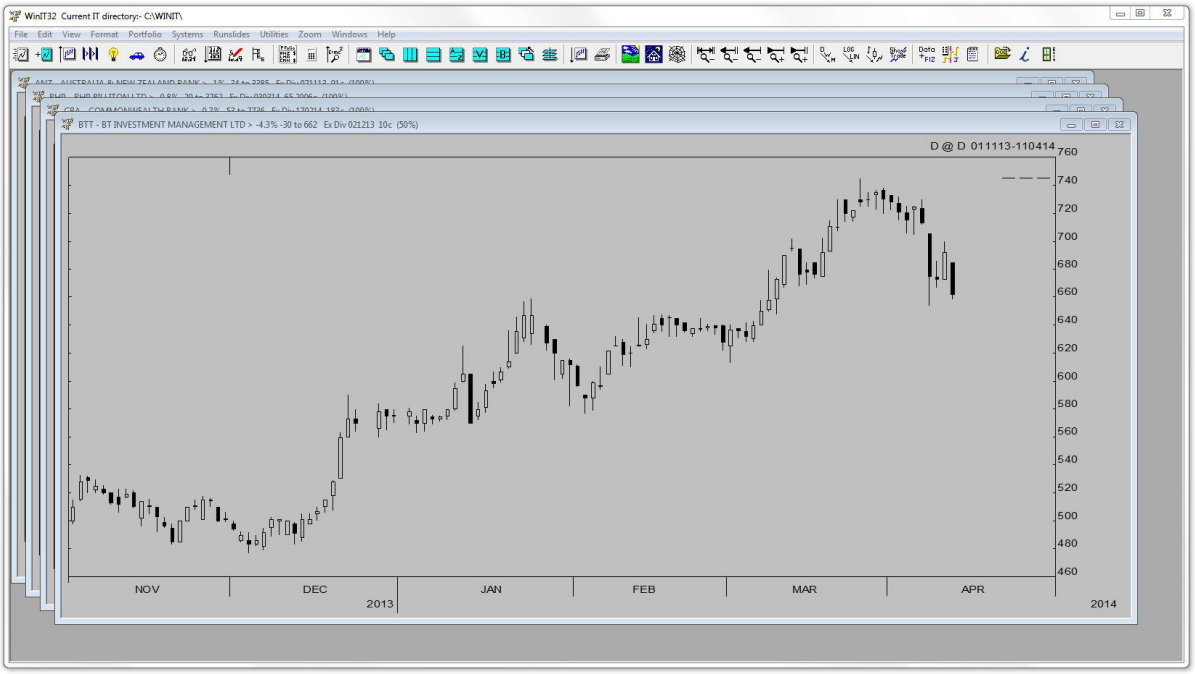


Fig 2.15

You can maximise any one chart of your arrangement to make it fill the whole working area by clicking the maximise button at the top right of the window containing the chart or pressing the **up arrow** key. The restore button if clicked will restore the chart to its original position or you can simply press **down arrow**. The maximised chart, if any, is always the active chart.

Activating Charts

At any time there will be one chart, the active chart, with its title bar highlighted. You can activate any other chart by simply clicking its title bar which will itself become highlighted and the previously active chart will "lose the focus".

You can activate all charts in the working area in sequence by clicking button 22 on the main toolbar **Activate next chart** which is equivalent to selecting **Windows** from the main menu and clicking **Activate next chart.** Alternatively, the speedkey option for this operation is to use the left and right arrow keys on the cursor keypad which will allow you to activate in both directions.

As you do so you will notice the title bar of the next chart activated becoming highlighted. However, if your chart is maximised as discussed previously then the next highlighted chart will become maximised replacing the previous one. By maximising one of the charts in your working area and pressing the right and left arrows, you can very rapidly switch between maximised views of any of the individual charts in your working area.

Remember the arrow keys are extremely useful speedkeys for manipulating charts on screen. Left and right arrow activate the previous and next charts respectively. Up and down arrow maximise and restore the currently active chart.

Generating Reference List of Securities for Foreign Databases

When using foreign databases eg BodhiOne, Metastock or QuotesPlus a list of all (or selected codes) can be generated from the Load New Security dialog (2nd toolbar button). When the Select button is clicked the list of codes showing in the table below are written to the standard list file SELECTED.LST. This list can then be used as the reference list for filtering in the System tester, autorunning or charting.

Saved Charts

Saving Charts

When you have created a single chart or group of charts (up to 506) in your working area then you can save this arrangement to disk. When you come to retrieve this arrangement the windows containing the charts will be restored to their original positions and the charts themselves will be recreated with all the workings such as indicators trendlines, text that existed when they were saved. However, any additional price and volume data that have been received since it was first saved will allow the chart to be updated to the current date.

To save any chart arrangement that you have created press button 24 on the main toolbar **Save arrangement of charts** or select **Windows** from the main menu and click the item **Save arrangement.** The corresponding speedkey is **Ctrl S**. You will then be presented with a dialog box inviting you to type in a title or description of the chart arrangement that you will identify it by for later retrieval. Click **OK** and all is done.

The chart arrangement will be saved into the currently active Category of the ten categories that are available. These titles will be ordered alphanumerically in the list of chart titles.

Retrieving Charts

To retrieve a chart arrangement from disk select the button 3 on the main toolbar **Replay saved charts** or select **View** from the main menu and click the item **Replay saved charts** or simply press **Alt R.** The following dialog box will appear showing all the titles in the large list box in alphanumeric order.

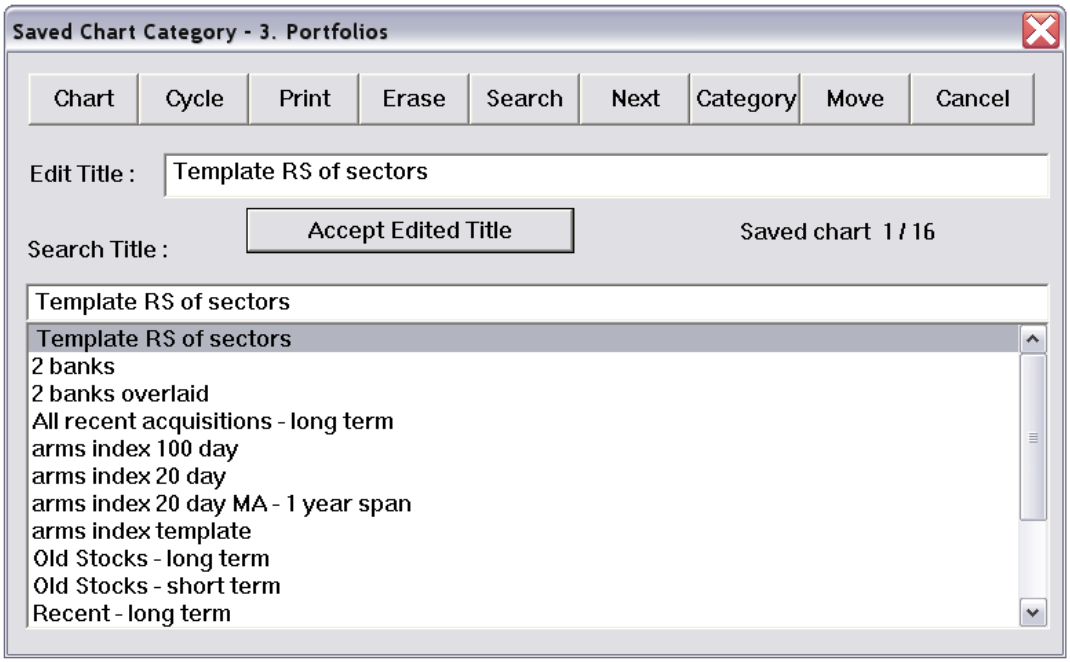


Fig 2.16

Scroll down to the one you want using the up arrow or down arrow keys, the mouse on the scrollbar at the right, or start to type the first few characters of its title in the **Search title:** edit box and the title you are looking for will spring into view. To load your required title double click on it or highlight it with a single click and click the chart button above. Your charts will be reconstructed (or "replayed") in the working area just as you saved them except that now they may be updated.

You can also search the list of titles for text fragments such as "BHP" or "weekly" by clicking on the search button and entering a first search string. You can also enter an optional second string and it will search the list of titles for any title containing both strings. After the first match has been found, pressing the **Next** button will find the next title with a match.

Quick Chart Templates

There is a special saved chart arrangement in each category, which is the very first one on the list, and you can pull this arrangement up at any time by using the speedkey **Alt Q**. This is particularly useful if you frequently wish to see your charts in a particular format arrangement.

Simply create a saved chart arrangement in your favourite layout with time ranges, chart types, and indicators that you require and save it into the current category. To ensure that it goes into first position and stays there just save it with a title commencing with a few spaces. Whenever you wish to retrieve the template just press **Alt Q** and your layout will immediately appear on screen. **Ctrl N** will then allow you to substitute any other security code in all windows of your template.

Editing Saved Chart Titles

The above dialog box has an **Edit title** dialog box that allows you to edit the currently highlighted title. After you have made any changes that you wish click on the **Accept edited title** button to save the changes.

Deleting Saved Chart Arrangements

Click on the title of the chart you wish to delete and then click the **Erase** button. A dialog box will appear asking you to confirm your intention. If you no longer wish to be prompted for confirmation press Cancel to silence further warnings for the remainder of the current session.

To delete a large number of saved charts you can press **Alt E.** If these keys are held down **Alt E** will very quickly remove the currently highlighted chart and others following it.

Editing Previously Saved Charts

Any chart arrangement previously saved to disk can be retrieved and edited in any way and then saved back to disk in its modified form including the addition or deletion of any number of charts. When a previously saved chart arrangement is being resaved to disk you are given the opportunity to save it as a modification of the previously saved one or to add the modified chart as a new saved chart arrangement to the currently selected category.

Changing Chart Categories

You have available 10 separate **categories** into which you can save your charts and the names of these categories can be customised to your requirements eg Industrials, Mining, Portfolio stocks, Futures, Currencies etc. Each category can contain up to 10 000 chart arrangements of up to 506 separate chart windows. This makes a total of up to 50 600 000 individual charts that can be saved.

To change to a new category click the **Category** button in the Saved charts dialog box and a list of category titles will be displayed in the new dialog box which will appear as below. Category titles can be edited as in the previous dialog and to change from the current category to any new category simply double click the title of the chart category or select it with the mouse and press **Change to.** The dialog box for Saved charts will change to display the titles in the new category. To retrieve a chart arrangement in the new category just select as before.

Note that whenever you save charts elsewhere in the program they will be saved into the currently active category.

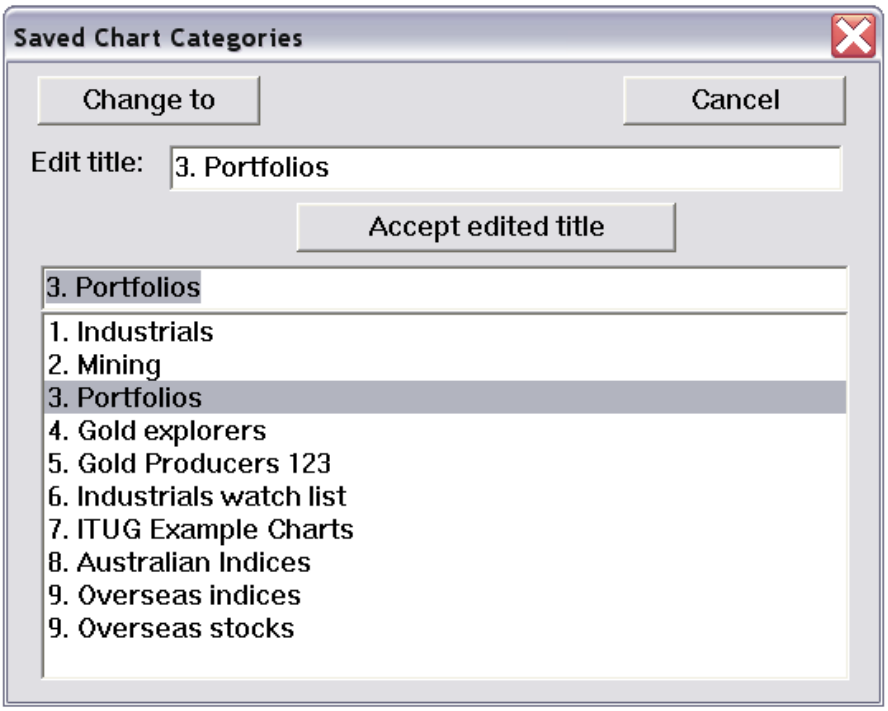


Fig 2.17

Moving or Copying Charts between Categories

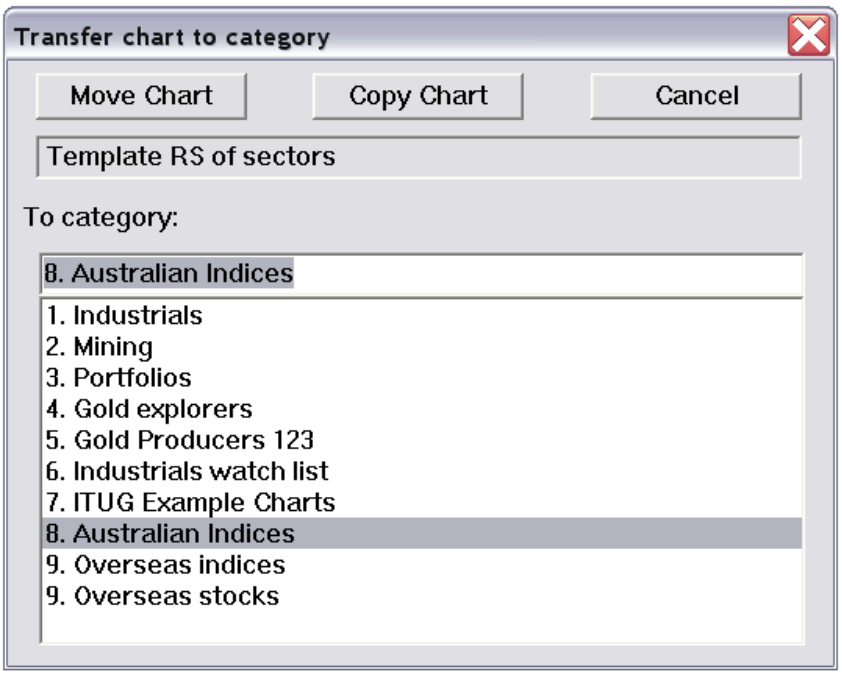


Fig 2.18

You can also move or copy charts from one category to another. Just select the chart you wish to move or copy, click the **Move** button on the **Saved chart** dialog box and you will be presented with another dialog box as below. Select the category into which you wish to move or copy the chart and click the **Move** or **Copy** button as appropriate.

Cycling Saved Charts

From the **Saved chart** dialog box highlight the chart title from which you wish to commence a slideshow. Then click **Cycle.** The saved charts from that title onwards will be displayed in sequence separated by a time delay as set from **Runslides** on the main menu and selecting the **Delay** item. Pressing **ESC** at any time will allow the slideshow to be aborted. Pressing the spacebar will temporarily halt the slideshow to allow the currently displayed arrangement to be manipulated and possibly resaved. To recommence the slideshow after this temporary delay press **F9**.

Stepping through Saved Charts

If you have retrieved a saved chart arrangement on to the screen from disk then it is possible to step forward to the next chart arrangement in the list or back to the previous one by pressing the **plus** (or **spacebar**) and **minus** keys respectively without the need to return to the dialog box.

Printing Charts

Any chart arrangement can be printed in black and white or colour to a printer supported by Microsoft Windows by clicking on button 25 **Print arrangement of charts** on the main toolbar or choosing **File** from the main menu and clicking the **Print charts** item. The speedkey **Ctrl P** also performs this function.

You are then given the opportunity to print an optional caption at the bottom of the printed chart arrangement and then to set up your printer, for example by changing from portrait to landscape etc, before printing commences.

Importing charts into other documents

If you press the speedkey **Ctrl+Shft P** instead of **Ctrl P** the chart in each window will produce an enhanced metafile in the \WINIT\WORKING\EMF directory with a filename CHARTnn.EMF where nn is a 2 digit number from 00 to 99. Each new metafile produced adopts a number, one above the last one produced, until it reaches 99 when it cycles back to 00 overwriting the previous one by the same name. Metafiles are vector pictures of your charts that can be imported into word processing documents and can be stretched or compressed to size without loss of resolution.

For example, to import a metafile chart into a Word document select **Insert/Picture** from the main menu of Word and browse in the WINIT\WORKING\EMF directory until you have found your picture to insert.

To reset (ie delete) all EMF files select Utilities/Reset all EMF files from the main menu. This deletes all EMF files in the current WORKING\EMF folder and resets the numbering back to chart00.EMF.

Latest Data Window

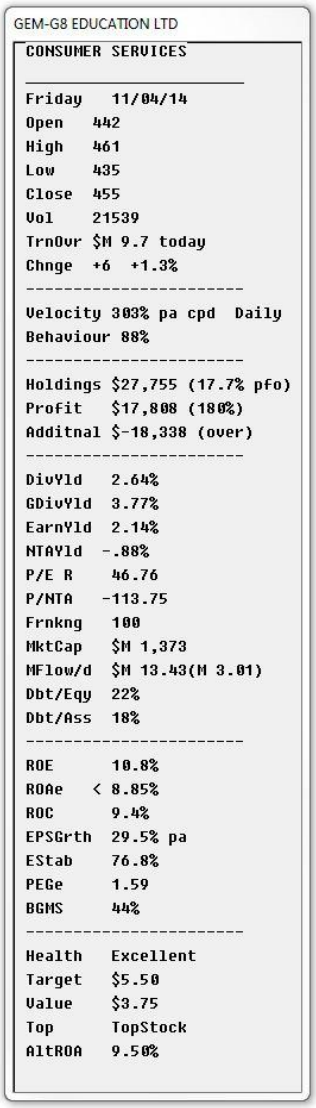


Fig 2.19

Click **Display data box (**button 3 of *Data display* on the floating toolbar) or the speedkey F12 to obtain the data relevant to the last date in the file and the background to the box will be grey. If the F7 or F8 keys are pressed (or the mousewheel rolled) to scroll the display then the data box will instead show data relevant to the last period shown on screen and the background colour will change to the tooltip background colour. The data window will be shown in the upper left hand corner of the screen. This is a toggle which will be switched off by clicking this button again.Note that Turnover will be described as 'today', 'this week', 'this month' depending on the compression state of the file.

Apart from the price, volume, change and turnover data the global indicators of Velocity and Behaviour are also shown below and if you have chosen to display Portfolio trades and other portfolio information you may see listed the value of your holdings, the profit you are currently recording as well as the additional purchase you could make without violating the risk criteria you have set in the Risk Calculator.

If **ESC** is pressed then the window will be removed but the toggle is still on and any subsequent charts which are plotted will have the latest data window activated. Click this button at any time to toggle it off.

If button 4 of the *Data display* group - **Display extended data box –** is clicked instead (or button 38 on the main toolbar, or **Ctrl F12** is pressed) then extra information is supplied. This extra information is the DividendYield, Earnings Yield, NTA Yield, P/E Ratio, Price/NTA, % Franking, Market Cap, Moneyflow/day (proxy for average daily $ turnover), Debt to equity and Debt to assets. This will be available only if the relevant information has previously been inserted in the F2 notepad as described below or by the Database Manager described in Chapter 8.

If you are employing User Supplied Extended Fundamental Information using CSV files as described elsewhere in this manual then additional information will be displayed in the last two sections.

Moneyflow on the F12 data box is a good proxy for average daily turnover and is calculated as an average of the last 20 traded days irrespective of whether the file is compressed to weekly or monthly. Also displayed in brackets after this figure is the minimum MoneyFlow recorded for any single day in that 20 day period. However, if it used as a subchart indicator then it is affected by the compression state of the file where it is calculated by summing weekly or monthly figures. Money Flow for a period is measured as period volume times

period closing price and hence the longer the period the less accurately will it reflect true turnover so daily compression should be used wherever possible. Because Money Flow varies widely over time, in order to get a better indication of this variation you should view it as a subchart indicator.

The speed key for the latest data window is **F12** and for the extended data window **Ctrl F12**. However F12/Ctrl F12 functions can be interchanged so the most frequently used option can be invoked without also pressing the Ctrl key. From the main menu check or uncheck 'Format/Reverse F12/Ctrl F12'.

Moving Data Window

It is possible to display previous data values directly from the chart by moving the mouse cursor to the bar corresponding to the date of interest. This facility is accessed from the **Moving Data box** button 5 of *Data display* on the floating toolbar to take you immediately from the front screen, via the chart edit mode, into the Moving Data Window. **Right Click** on the mouse to exit. Alternatively click on button 39 of the main toolbar. Speedkey **Ctrl J** is an alternative and toggles between these two states.

You can move the cursor to highlight the next or previous bar by pressing the right or left arrow keys or rolling the mousewheel.

Notepad and Alarm Below and Alarm Above

Clicking **Notes for security,** the second button of *Data display* on the floating toolbar, or pressing the F2 key while a chart is showing will cause a form to appear on which notes may be written, fundamental information displayed and also on the form there is provision for two price alarms to be set. Button 40 from the main toolbar also performs this function.

This information can be accessed at any time a chart is displayed using that data file.

Notes

You can write notes in freeform in the main edit box for the particular security file whose chart is active. This provides a very quick and easily accessible facility for documenting your information on a particular security.

The Database Manager uses the first line of the Notes as above so that any manually entered notes should commence at line 2 or after

Documents

By clicking the Docs button on the F2 notepad you can access a Word document file for that security that will provide an even more flexible and sophisticated format for you to record your notes and display charts because the full power of Microsoft Word will be at your disposal. (You must have Microsoft Word or a compatible wordprocessor installed on your computer to utilize this feature)

In addition the F2 notepad is one of the four windows in Insight Trader that accept drag and drop documents. The other three are the main charting window, the Portfolio Summary window and its Accounts Transaction dialog.

Any documents relating to this particular security that your wish to store for later retrieval can be dragged and dropped anywhere on the F2 Notepad dialog. You can access these documents at a later time for viewing or editing by pressing the Docs button. For further information on the Insight Trader Document Management System please consult Chapter 11 at the end of this manual.

Fundamental Information

In addition to the notes there is provision to insert the information for Dividend, EPS, NTA, and % Franking and the other fundamental values shown.

The nearest forthcoming dividend exdate (where this is available) will appear in the final fundamental field in the form *Exdate/Dividend in Cents/Franking/Payment date*. Any chart of the security will also show in the caption bar the first three of these. In addition a vertical bar (in the colour attributed to the open interest field) of a length equal to the dividend plus the imputed tax credit will drop from the top border of the chart and be positioned between the exdate and the previous day. This information will continue to be displayed on the chart until the next dividend is announced

Accessing Fundamental Information from the Internet

You can quickly access extensive financial information for any company from the internet.

From the currently active chart just press Ctrl+F2 to retrieve information for that company from the Financial Times website (FT.com). Holding the Ctrl key while clicking the corresponding F2 Notepad toolbar button will achieve the same result.

When in the portfolio manager also using the Ctrl key with the F2 Notepad toolbar button will allow you to access this information in a similar way for the currently highlighted company in the main summary screen for your portfolio.

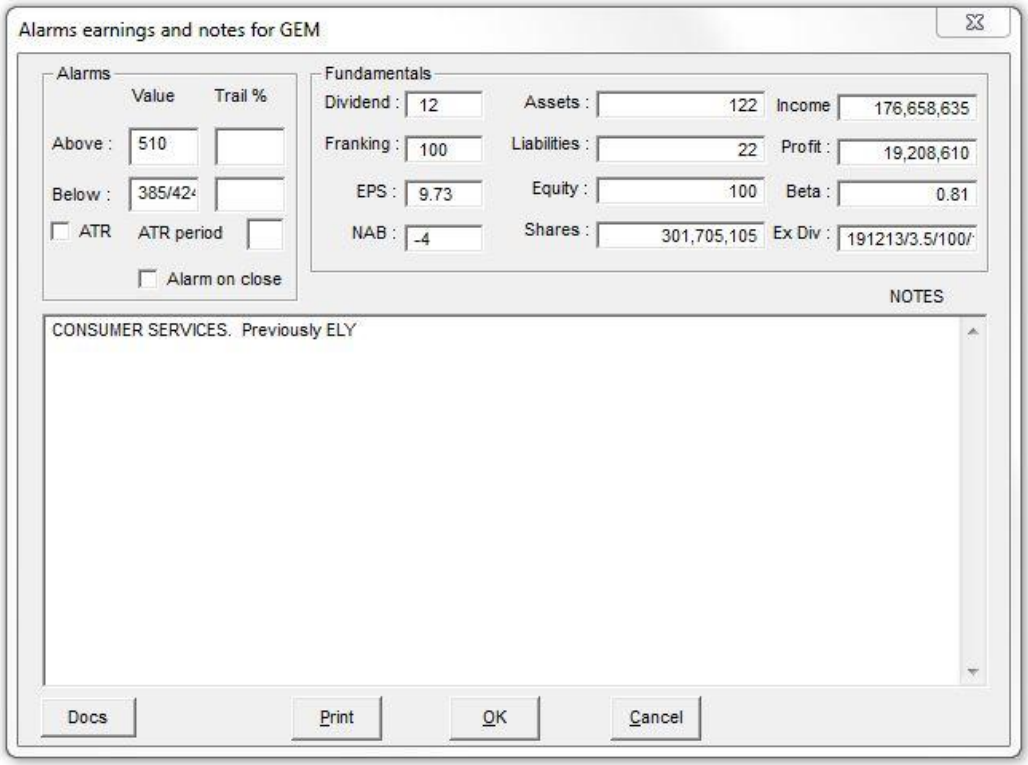


Fig 2.20

Alarms

Alarms will sound if the latest low price of that security reaches or falls below the Alarm Below or the high price reaches or rises above the Alarm Above. These alarms will sound during the normal datacapture process or from within the program Insight Trader itself whenever that file is loaded. A check box enables you to use the closing price rather than the low or the high to activate these alarms.

Stops can be of two main types – fixed stops or trailing stops. If you want a fixed stop just put in a **Value** for **Above** and/or **Below** and check **Alarm on close** if you require this.

For trailing stops you need to first set starting **Values** for the stops as described above. If you want a percentage trailing stop make sure the ATR box is not ticked and put the required percentage values in the **Trail %** boxes where appropriate. If you want ATR stops instead then tick the **ATR** box and put values for the number of ATRs required in the appropriate **Coeff** boxes. You will also need to specify the ATR period.

When the F2 notepad is accessed again at a later date the stop **Values** will be updated according to the trailing calculation. These will also automatically adjust on the charts.

The alarm stop levels are indicated by short dashed lines on the right hand side of the chart. If an alarm is hit a prominent message to that effect is displayed on the top left hand corner of all charts of that security and it is also indicated in the Portfolio Manager main Summary screen by highlighting the row of the security in question in either bright red or bright green.

The Three Alarms

There are actually three Alarms (or Stops) available to alert you to price levels having been crossed for a particular security - Alarm above, Alarm Below, Alarm Below Soft. In the Alarm Below box in the F2 Notepad if you place a single number in this box this will be the normal hard sell stop. If you place after this number a slash followed by a second number eg 483/495 the second number will be the soft stop. Similar to the Alarm Below normal hard stop, if the daily low falls below this number, then a warning banner (purple instead of red) will appear at the top of any chart of that security. (If the 'Alarm on close' option has been ticked on the F2 notepad then it is the close of the day rather than the low which must be below the soft stop before the alarm is activated) A similar purple warning (for the soft stop) will be shown in the portfolio manager on the row corresponding to the security where the alarm has been triggered.

The horizontal dashed line marking the level of the soft stop takes its colour from the cursor line and can be changed from the main menu "Format/Preferences/Graphics colours". The colours of the other two stops lines are taken the same as those of Candle up and Candle down.

Whether the Alarm on close box has been ticked or not will determine globally for all stocks whether it is the day's close or instead the extremes of the day's trading which activate the stops. This setting controls the behaviour for all three stops for all stocks. However, it is possible to override these global settings by placing an H, L or C after any of the numbers for any of the stops for any particular stock. (NB It is not case sensitive and h, l or c will do)

For example, if the 'Alarm on close' option is not ticked then it is the day's high and low respectively that will determine whether the 'Alarm above' and 'Alarm below' (including the Soft stop) are triggered. However, if we set the alarms, say, as follows:

1. Alarm above 163
2. Alarm below 147/152c

the 'C' after the soft stop means that the soft stop will only trigger if the day's close is below it while the other two are still activated by the extremes.

You can use any of HLC for any of the stops even using an L in the 'Alarm above' or an H in the 'Alarm below' Some examples are as follows:

1. Alarm above 163 163h 163l 163c
2. Alarm below 147 147/152 147/152c 147c/152 147h/152 /152 /152c

Extending Alarm Lines

You can extend the alarm lines from the short dashed line on the right hand side of the chart to span the whole time range by toggling with the tilda (~) key. (Note that the shift key is not required) This allows you, for example, to compare your stop price with patterns providing historical support and resistance.

Suppressing Alarms

To hide the indication of alarms on any chart the speedkey **Ctrl+Shft+H** will hide all manifestations of the alarm including the short horizontal dashed alarm level on the right hand side of the chart and any red or green banner at the top of the chart indicating that the alarm has been hit. This allows you to print charts without the alarm indications. In any event the alarm banner is automatically removed when printing irrespective of whether this hide option has been invoked.

Alarms triggered by loading security files

When distributing data with the data capture utility Datacapture (see Chapter 8), an alarm will sound whenever a stop is hit during the datacapture process if the alarm and highlighter are switched on. Securities that have their stops hit will appear in the highlighted list in Insight Trader with all criteria set to zero.

Alarms are triggered whenever a security file is loaded into Insight Trader, where stops have been hit and the siren will sound if the siren in the program itself is enabled under **Format/Alarm status** from the main menu. Also any charts for securities where the stops have been hit will be prominently marked in colour in the upper centre of the screen. The sound used for these alarms is a wave file, many examples of which will be found in the \WINDOWS\MEDIA directory. You can specify the path for the particular wave file that you wish to use for the alarm from the menu **Format/Preferences**.

It is possible to switch off the siren for the stop loss alarm from both Datacapture and from within Insight Trader. You can switch off the alarm from within the program from **Format** on the main menu by unchecking the item **Alarm status.** To switch it on again click this menu item to check it again. If you wish to change the default alarm status for future sessions then select **Save configuration** from **Format** on the main menu after you have set the alarm status to the desired state. It is not recommended that either of these alarms are switched off as it would defeat the purpose of alerting you to these stops having been hit.

Creating a list of Alarmed Securities

Whenever the **Check Data Integrity Option** (see Chapter 7) is run a file **ALARMSET.LST** will be produced that contains all the stocks that have alarms set and lists these together with their current activating price if alarms have been hit. This file is accessed like any LST file by clicking the lightbulb button on the main toolbar and loading this file which is is available as a standard LST file like HILITE from the dropdown list box from the Enter Highlight File Name dialog box.

The speedkey access to the Notepad is to press the **F2** key and for this reason this notepad is sometimes referred to as the F2 Notepad.

DO NOT RELY ON THIS ALARM FOR TRADING DECISIONS AS COMPUTER SYSTEMS CAN FAIL.

Dragging Alarms with the Mouse

From the Chart Edit window, by using the mouse, alarms can be set, dragged, deleted and rounded from any chart by following the instructions below:

- Moving the cursor close to the right hand edge of the chart will cause the price level to be displayed in the caption bar of the Chart Edit window.
- To set an Alarm Below, **Ctrl Left Click** at the price level required and the price will be rounded according to ASX rules.
- To set an Alarm Above, **Shift Left Click** at the price level required and the price will be rounded according to ASX rules.
- Moving the mouse over an existing alarm will display its type and value in the caption bar.
- To delete an Alarm, **Ctrl Right Click** on it.
- To move an alarm drag it with the left mouse button to the new position and release:
    - The price level will be rounded to .01 if no key is held
    - Holding the **Shift** key down while dragging and before release will round to the nearest 0.1 cent
    - Holding the **Ctrl** key down while dragging and before release will round to the nearest cent
    - Holding the **Shift+Ctrl** key down while dragging and before release will round to nearest 0.5 cent
- The rounded price level during dragging will be displayed in the caption bar.

Adjusted and Compressed Files

Any dependent file that is adjusted for issues should have a percentage sign appended to the name for the masterfile. Eg if "BHP" is the name of the masterfile, then when this is adjusted for issues, the adjusted file will be saved as "BHP%". (Note that this is done automatically by Datacapture if you are downloading via the internet or manually updating using BULK. If this is done then any notes will be attached to the masterfile BHP and not the adjusted file BHP%). The adjusted file will have the notes appended when dependent files are updated through the program.

The use of the character "%" is reserved for dependent files adjusted for issues etc. Also the character "@" is used to indicate that a weekly or monthly compression has been performed on the file.

If the resident file contains either of the characters @ or % then notes will be attached to the unadjusted file. If you are attempting to write to a notepad with a resident file BHP or BHP% or BHP@W or BHP%@M etc the notes will be written to the masterfile BHP.

Customising your Charts

Presentation Options

This section will detail the manner in which you customise each of your individual charts to present the data in the format you require. Aspects to be considered here include:

- Chart type
- Direct, relative strength or rebased plots
- Linear or logarithmic axes
- 5 or 7 day calender axes
- Automatic or fixed scaling
- Daily weekly or monthly display
- Subchart size and contents
- Volume toggle between log and linear
- Grids
- Hiding issues/splits line
- Overlaying one chart on another

Chart Type

Changing the chart type of any displayed chart is very easy and can be done from the floating toolbar or via speedkeys. Having created a chart in a window as described previously you can change its type by placing the mouse cursor over the active chart and clicking the right mouse button to retrieve the floating toolbar. Clicking on one of the seven buttons of *Chart types* allows you to change the chart type to line, bar, candlestick, point and figure, equivolume, equicandles, swing. (Scatter diagrams are accessed via **View** in the main menu and choosing the item **Chart specs**. This will be dealt with in Chapter 4.)

The speedkeys **L, B, C, P, E, Q and U** perform the same function. The charts immediately redraw to the chosen type.

Pressing the **C** key (or using the candlestick button on the floating toolbar) allows you to rotate between candlesticks, coloured bars and candlesticks that have their shadows coloured differently according to whether they have closed above or below the last period close.

For point and figure you will be prompted for additional information on the **Boxsize** (default **auto**) and the **Box reversals** (default 3). If you specify the number of boxes to reverse as a negative value then this will force the chart to be drawn on the basis of close only even if high and low are available.

For Gann Swing Charts you need to enter the number of **periods** and **filter** limits. Filter limits can be expressed in either points or in percentages. Setting the number of periods to zero will give a price only swing chart. Setting the filter limits to zero will give a time only

swing chart. Setting both will give a swing chart for both time and price. The swing charts switches between the rectangular representation and the sawtooth depending on the amount of data to be displayed.

Relative Strength and Rebased Plots

A relative strength chart, which is simply the ratio of one security to another security or index is simply constructed by pressing **N** for New and entering in the box provided:

BHP\RIO for the RS of BHP to RIO or

ANZ\XAO for the RS of ANZ to the All Ords

Note that the separation character is a backslash not a forward slash.

To plot a rebased chart that starts from the left at 100 units on the vertical axis type **N** for New and enter in the edit box provided:

ANZ and hit **OK** or press **ENTER.**

This will give a rebased chart of ANZ.

If you require a rebased relative strength chart you would enter instead:

ANZ\\XAO

for a rebased relative strength chart of ANZ to the All Ords.

Once you have invoked either relative strength or rebase mode as above then you can simply press **N** for New (to change the security in the current window) or the +/= key (to place a new security in a new window) and enter say:

NAB

and you will get a chart of NAB\ NAB\XAO or NAB\\XAO depending on the current mode of the active chart.

To exit the relative strength or rebase mode just press **Ctrl Z** and the current chart will revert to a normal line chart of the denominator security.

Note that relative strength and rebased charts are only possible using line or point and figure charts.

Linear and Logarithmic Axes

You can toggle your vertical axis type between linear and logarithmic from the floating toolbar by clicking button 3 of *Axes* - **Log/linear** . Pressing the speedkey **F** will perform the same function. Button 35 of the main toolbar also performs this function.

You can also make your horizontal axis logarithmic or linear if they are non calendar axes but this is done from **View** in the main menu at the **Chart specs** item. This is discussed in Chapter 4.

5 or 7 Day Calendar Axes

Mostly you will want to plot your data according to a 5 day calendar axis spanning only the normal trading week days. However, for certain types of analysis, such as Gann, you may wish to use a 7 day week. This is accessed from **View** on the main menu by clicking week length and then **7.**

Automatic or Fixed Scaling

Usually you will want to allow the program to choose your scaling ranges for you. This is called automatic scaling where the chart axes are arranged to include all the data in the security file. Should you wish to do so you can set up (from **Format** on the main menu under **Preferences**) so that automatic scaling will plot your charts from a fixed date onwards eg 010113. This will be dealt with in Chapter 6.

You can toggle between automatic and fixed scaling from the floating toolbar retrieved by **Right Click**ing your mouse over the active chart. After clicking buttons 1 or 2 of *Axes* you can specify the scaling you want on the X (horizontal) or Y (vertical) axis. The corresponding speedkeys for this operation are **X** or **Y**.

From the dialog box which appears click on **Automatic** or **Set scales** as required. If you choose **Set scales** :

X-axes

You will be asked for the limits you require. For a fixed period say 010114 to 300614 enter in the *ddmmyy* format as follows:

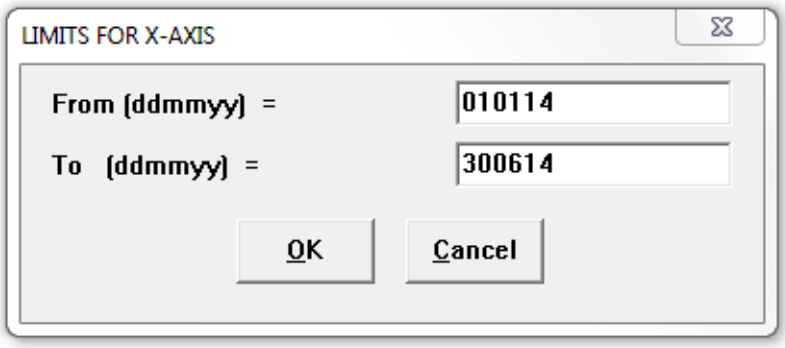


Fig 2.21

and your chart will be plotted to include the dates you have specified. To allow tidy scaling the actual date range shown may be a little larger than your limits. If you leave the last date blank the chart will scale to include today's date.

If you leave the first date blank it will chart from the first record in the file or from the **Default date for charts** if you have set this value in the **Configure/Preferences** dialog box shown later in fig 6.2.

You can also set a "running time window" to plot say the last 100 calendar days with 10 days white space in front of your chart for projecting trendlines etc. This would be achieved by placing:

-100 in the first edit box and

@+10 in the second edit box.

The @ symbol indicates the current date so you are asking to include 100 days ago to today plus 10 days. If you save this chart to disk and retrieve it at any future date it will always show the last 100 days with 10 days of white space in front. As time goes on days are dropped off the left and others added to the front of the chart.

Default white space applicable to all charts plotted can be selected from the **Format/Configure Preferences** option from the main menu.

Y-axes

Setting the vertical axis is similar to that above but you only need to specify the lower and upper bounds say 100 to 500.

Zooming

Zooming is the process which allows you to focus and magnify detail in your charts or to step back and see the long term big picture. Buttons 1-6 of *Zooming* on the floating toolbar can be clicked to achieve zooming in various ways. Button 1 zooms out the chart fully to display all data in the file. Button 2 will zoom out to show 50% more data than is currently displayed. Buttons 2 and 3 zoom out and in, keeping the central point of the chart as a fixed reference. Buttons 4 and 5 zoom out and in but keep the last point on the right hand side of the chart as the fixed reference. Button 6 zooms out on the last 80 days. A selection of these zooming functions is also accessible from buttons 29-33 of the main toolbar.

These operations are also available from speedkeys as indicated on the toolbar buttons - **Ctrl F3** to zoom out completely. **F3** and **F4** to zoom out and in with a central point reference and **F5** and **F6** to zoom out and in with a final point reference. To zoom in completely on the last 80 days use **Shft F6** (not Ctrl F6 as this key is reserved by Windows). **Ctrl F5** will zoom right back from the last day shown.

In addition to these zooming option there is a Zoom submenu on the main menu that provides preset time ranges from 1 months to 15 years. Click Zoom and then select the required time period. These options can also be accessed via the keyboard eg: For a 3 year period – press Alt+3. For a 5 month period – press Ctrl+Alt+5

An additional form of zooming is available from the Chart Edit Window to be described later in this chapter.

Scrolling the Chart

There are additional operations available only from speedkeys. **F7** and **F8** will scroll the chart left and right by one day at a time, **Shft F7** and **Shft F8** by one week at a time and **Ctrl**

F7 and **Ctrl F8** by one month at a time. **PageUp** and **PageDn** keys will page the chart backwards and forwards in history one page at a time. The **Home** and **End** keys will take you to the beginning and end of the file respectively. The < and > keys have the same function as F7 and F8 in that they can also be used to scroll the display left and right by one day at a time. Some of these have equivalents on the floating toolbar under *Paging*.

Rolling the mousewheel forwards or backwards will have a similar effect as that produced by F7 or F8 except that every click of the mousewheel roll will move the data fast - at 1/8 of a screen at a time. If you single click the mousewheel button you can toggle the movement to slow where each click of the mousewheel roll changes the display one day at a time and is therefore identical to F7 and F8. Click the mousewheel button again and it reverts to fast scroll.

Note that double clicking the mousewheel button toggles between two different states. The default is that rolling the mousewheel will cause the data in the active chart to scroll as just described above. Double clicking the mousewheel button will put the system into the other state where any mousewheel rolling will cause active chart to change between the different charts on screen (if there are more than one) and it is therefore equivalent to pressing the left and right arrow keys.

Using the Day by Day Scrolling for Simulated Trading

You can advance charts in a day-by-day mode where pressing the keys F8 or ">" or using the mousewheel as described above will advance the chart one day at a time. This gives you the opportunity to practice your trading technique by taking paper trades and exiting using historical data advanced one day at a time. The keys F7 or "<" or mousewheel will similarly take the chart back one day at a time. In default mode it will always retain a fixed number of days on screen where as one day is added to the front of the chart the oldest day drops off the end. You can, however, choose to anchor the first day on the chart to always remain the first day on the chart by accessing the menu item under "Format/Preferences" and placing a tick in the option "Scroll Anchor". In this second method the number of days displayed on screen will increase by one each time the F8 or ">" key is pressed.

All alarms are set to trigger whenever the final price in the file violates the stop price. When using the above day-by-day feature you will more likely want the alarm to trigger on the price for the final day displayed on the screen rather than on the last day in the file. The speedkey **Ctrl+Shft+?** will allow you to toggle between these two modes. This speedkey operates only when there is at least one chart on screen.

Locking in the Daily, Weekly or Monthly Display

During the zooming of charts the display for a chart will automatically change between daily, weekly and monthly depending on how much data there is to display on the screen. Should you however wish to maintain a particular display mode during zooming then it is possible to lock in the current mode. From the floating toolbar click button 7 of *Zooming* - **Lock daily weekly or monthly display**. Alternatively, the speedkey **Ctrl K** will achieve the same result. These commands will also toggle the lock off.

This lock is also toggled off when you change the chart type to bar, candles etc with the speedkeys or corresponding floating toolbar buttons.

Daily Weekly or Monthly Display

For those chart types for which daily, weekly or monthly displays are relevant - ie bar charts, candlesticks, equivolume and equicandle you can change the display from the floating toolbar. Buttons 1-3 of *Display* on the floating toolbar **Daily, Weekly, Monthly** can be clicked to change the display. Alternatively, pressing the speedkeys **D**, **W** or **M** will achieve the same result. Button 36 on the main toolbar will rotate between these displays.

Buttons 1-3 of *Compression* on the floating toolbar are **Compress daily, Compress Weekly and Compress Monthly.** These have the effect of actually compressing the resident security file in memory so that all calculations such as indicators are performed on a daily, weekly or monthly basis as appropriate. The corresponding speedkeys to achieve this effect are **Shift D, Shift W** and **Shift M.**

At the top right hand corner of each chart just before the date range you will notice a marking like W@D. This indicates that the chart is a weekly display of a file whose compression status is daily. M@M indicates a monthly display of a file compressed to monthly.

When in compressed mode for weekly or monthly there is an option to allow an uncompleted bar to display at what would be the end of its period rather than on the date the last day's contribution to it - ie a partly formed monthly bar at 2/7/14 can optionally be positioned on 30/7/14 rather than on the 2/7/04. Tick the box **Partial bars to period end** on the configuration dialog from the menu **Format/Preferences.**

Subchart Size

The subchart, below the main chart, which usually contains volume bars and indicators, can be changed in size to occupy between 10% and 50% of the whole chart window. Choose **View** from the main window and click **Subchart size** and then click the % of the window that you want the subchart to occupy. To toggle the subchart so that it disappears completely use **Subchart -** button 6 of *Axes* on the floating toolbar or use the speedkey **V**. The subchart can consist of up to 9 indicators stacked vertically under the main chart.

The currently active chart and any subsequent chart will be drawn with the altered setting. Other currently displayed charts can be updated by activating each of them then pressing the **Quickchart** button, the first button on the main toolbar.

The subchart size can also be very quickly altered over a very wide range by clicking the left mouse button in the margin to the right of the vertical axis of the chart at the level where you require the top of the subchart to be positioned. You can also drag this position to any location.

Volume Log / Linear / Spill Toggle

If your volume subchart is suppressed towards the axis by one or two large volume spikes you may wish to change to Logarithmic volume in the subchart or Spill the volume into the main chart so that large bars do not dominate the chart.

This can be done (i) from the floating toolbar - button 5 of *Axes* **- Volume Log/Lin** (ii) from the main menu **View** then **Volume log** then **on.** Or it can be toggled on or off using speedkey **S**.

Grids

Grids on a chart are often helpful to the eye in estimating times and prices for parts of the chart remote from the axes. Grids can be toggled on or off by clicking **Grids** - button 4 of *Axes* on the floating toolbar. Alternatively use the speedkey toggle **G**.

If you press **Shft G** repeatedly instead the grids will cycle from none to horizontal to vertical to both and back to none.

Items Displayed in the Caption Bar of the Chart Window

Only if the compression state of the chart is daily you will see displayed in the caption bar of its window a number of items. For example:

-1.6%	Down 1.6% for the day
-109 to 6857	Down $1.09 to $68.57
(H-58%)	the percentage that the current price is below a recent high (peak)
(L-10%)	the percentage that the current price is above a recent low (trough)
(C-S=25%)	the percentage difference between the current price and Stop price
(H-S=32%)	the percentage difference between the recent peak and the Stop price

Ex Div 050314 58.883c (0%) Dividend Exdate Dividend (Franking)

For the percentage price differences above, the period for the recent high and low is set as a number of calendar days prior to the date of the last period in the file. This is set in the Preferences dialog under the main menu Format/Preferences.

Hide Issues/Splits, P&F Markers, Alarm levels, Compression Status etc

Share securities that have been subjected to issues or splits have this adjustment indicated on the chart by a vertical dotted line. This line can be toggled off by clicking button 1 of *Hide* on the floating toolbar - **Hide issues/splits line**. Alternatively use the speedkey toggle **H**.

This also hides other details including the dashed lines on the charts indicating stops, compression status, bid and ask levels on an intraday chart and any information on forthcoming dividends.

To hide the indication of alarms on any chart the speedkey **Ctrl+Shft+H** will hide all manifestations of the alarm including the short horizontal dashed alarm level on the right hand side of the chart and any red or green banner at the top of the chart indicating that the alarm has been hit.

Hide the Price Chart itself

Pressing **Ctrl H** or by clicking button 2 of *Hide* on the floating toolbar - **Hide chart** will allow the price chart itself to be hidden to allow you to see the other features such as moving averages etc uncluttered by the price action. Just press **Ctrl H** to toggle it back on again.

Overlay 2 or more Charts in one Window

If you have two or more charts in their own separate windows these charts may be overlaid one on top of the other in a single window - the currently active window. This is done by clicking button 23 on the main toolbar or from **Windows** on the main menu selecting item **Overlay charts**.

Note that only the scaling for the currently active chart will be shown. It is important therefore to ensure that any charts overlaid will have meaningful comparative scales, particularly along the horizontal axis. It is therefore usual to set scales on the horizontal time axis, and frequently also on the vertical axis to ensure meaningful comparisons.

Once charts are overlaid in this manner the process is irreversible. Should you think that you may need to revert at some stage to the individual component charts then the arrangement of individual component charts should be saved as a chart arrangement just prior to overlaying. In this way they can be accessed at any time in the future as the individual component charts by retrieving the saved arrangement.

Drawing Tools

The Chart Edit Window

In order to draw trendlines and other structures on your charts you will need maximum magnification for greatest accuracy. For this reason you can click on the actual chart area of the chart of your choice and it will expand to full screen to give you the **Chart Edit Window.** From this full screen view you will be able to add your trendlines, fans, retracements, target arcs etc. (You can also enter this chart edit mode with speedkey **Alt G** and exit it with **Ctrl Q)**.

Alternatively, if you access any of the *Drawing Tools* buttons from the floating toolbar, or use their speedkey equivalents, if you are not already in the Chart Edit Window you will be automatically placed in this window in the appropriate edit mode for the function that you require.

When these structures are completed you will click the **Save** button on the floating toolbar or use the speedkey **Ctrl S** and you will be returned to your working area with all the constructions transferred to the appropriate chart.

To enter the chart edit window click with the left mouse button on the chart on to which you wish to construct your trendlines or press **Alt G**. The chart will spring to full screen as shown in Fig 2.22. The bottom status bar will show the mode that you eventually choose (such as **Lines**), the number of days spanned by the ends (or reference points) of the trendline or other structure, the percentage by which the second end point is above or below the first, the slope of the line, overlay status, D W M lock, Y scale lock, 5/7 day scales, DW or M display status DW or M compression status, date range.

In Chart Edit mode if you place the cursor over any bar it will display in the window's caption bar the position of the cursor as well as the open, high, low, close and volume values for that date.

If you **Right Click** the chart the floating toolbar will appear with the various *Drawing tools* buttons that you require.

In addition to the technical structures such as trendlines, fans, projections, retracements, cycles etc there are available four *Shapes* that you can use to highlight aspects of your charts. These are a circle/ellipse, arrow, rectangle and round rectangle.

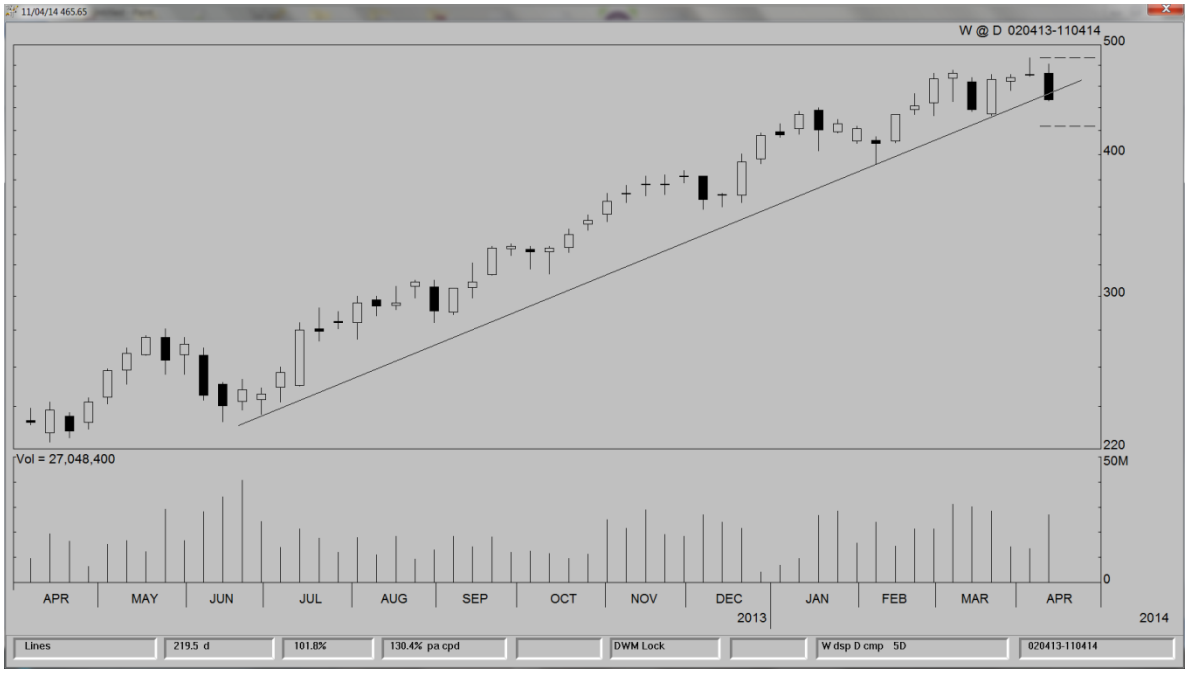


Fig 2.22

Trendlines

Simple Trendlines

To draw a trendline simply move the cursor to the point at which you wish the trendline to commence and click the left mouse button. You will notice the word **Lines** appear on the status bar indicating we are now in Lines mode. Then move the mouse cursor pulling the trendline to the second point marking the end of the line you wish to draw. (If you wish the line to be constrained to remain exactly either horizontal or vertical during this operation then hold the **Shft** key down while you move the mouse.) When you have the second point in the desired position click the left mouse button and the cursor will detach from the end of the line and "handles" will appear at its ends and midpoint.

Although the cursor is now detached this line is still **mobile** and it is possible to drag either end of the line to new positions with the mouse. By dragging the line at its midpoint you can move it bodily to a new position without changing its slope or length. When the line has been adjusted correctly you will need to set the mobile line in position and assign it a colour.

To do this click the right mouse button to bring up the **Choose Colour** dialog box. You can set the line to be solid dotted or dashed by clicking the appropriate button and then clicking the colour of your choice. The line is now set in position.

If you wish to draw a trend channel you should tick the box **Autospawn parallel line** before choosing the colour. In this case, after the first line is set, your mobile line will jump away giving you the opportunity to draw a parallel line by repositioning it from its midpoint or to drag it to a completely new position. Setting lines in this manner will keep spawning new parallel lines until you escape from Lines mode using the **Exit** button on the **Choose colour** dialog box or by pressing the speedkey **ESC** twice. This will also remove the mobile line.

(It it also possible, at any time in the Chart Edit screen, to spawn a line that has already been set by positioning the mouse over the line and holding the **Shft** key down and **Right Click**ing.)

We entered Lines mode simply by clicking on the Chart edit window and our line commenced drawing. You can also enter Lines mode without immediately commencing drawing by clicking **Lines** – the first button of *Drawing tools* on the floating toolbar. Lines mode can also be entered via speedkey **Ctrl L**.

When you have positioned your mobile line to where you want, **Right Click** to choose a colour and set the line.

(You can also press any of the number keys on the top row of the main keyboard **1, 2, 3, …. 9, 0** to obtain the colours you saw on the choose colour dialog. **Shift n** and **Ctrl n** (where n is one of these number keys) will give you dotted lines and dashed lines respectively. Once you have memorised the colours corresponding to these numbers the use of speedkeys will facilitate your work.)

Slopes of Trendlines

Once you have commenced drawing a trendline by dragging the second point of the line with the mouse you will see three figures on the left of the status bar below. The first is the number of days between the two ends of the line, the second is the percentage by which the second point is above or below the first point, and the third is the slope of the line expressed as an annualised growth rate. If the chart is linear then this growth rate will be a simple percentage growth rate per annum. If instead the chart is logarithmic then the growth rate will be expressed and designated as a compounding annualised growth rate.

Gann Lines

Gann lines are constructed by entering Lines mode from **Lines** button 1 of *Drawing tools* on the floating toolbar (or using speedkey **Ctrl L**) and positioning the mouse cursor over the point through which you wish to construct your Gann line. Then press **G** and a dialog box will appear requesting that you enter the price increment that you wish to use (the side of each square on your Gann chart) and then enter the price number and the time number.

For example if you want the squares on the grid of your Gann chart to be 5 cents and you wish to draw a 2x3 Gann line then you would enter 5 as the price increment, 2 as the price number and 3 as the time number.

It is important to realise that prior to drawing a Gann line you need to have decided the size of each logical grid square (ie the price increment) that you will be using for the chart. It may be 1 but does not have to be. The time side of the grid square is automatically chosen to be 1 day, 1 week or 1 month depending on the current display status of the chart. To draw a falling Gann line input the price number as negative.

Note that Gann lines can only be constructed on a linear chart. Also, although a 1x1 Gann line is at a logical 45 degrees to the axis on the screen it will generally not appear so because the physical arrangement of the pixels on the monitor and also the nature of the scaling you have chosen for the chart will stretch it in one direction or the other.

Point and Figure Trendlines and Price Targets

If you are using point and figure charts you can draw logical 45 degree lines. Position the ends of your mobile trendline to approximately where you wish them to be and press the keys < or > to give a 45 degree line going up or down. Note that the left end of the line stays fixed and the right end moves up or down to achieve the necessary angle. However, if the trendline is too long such that it would go out of the chart boundary then the mobile trendline will not move. You must then make your trendline shorter.

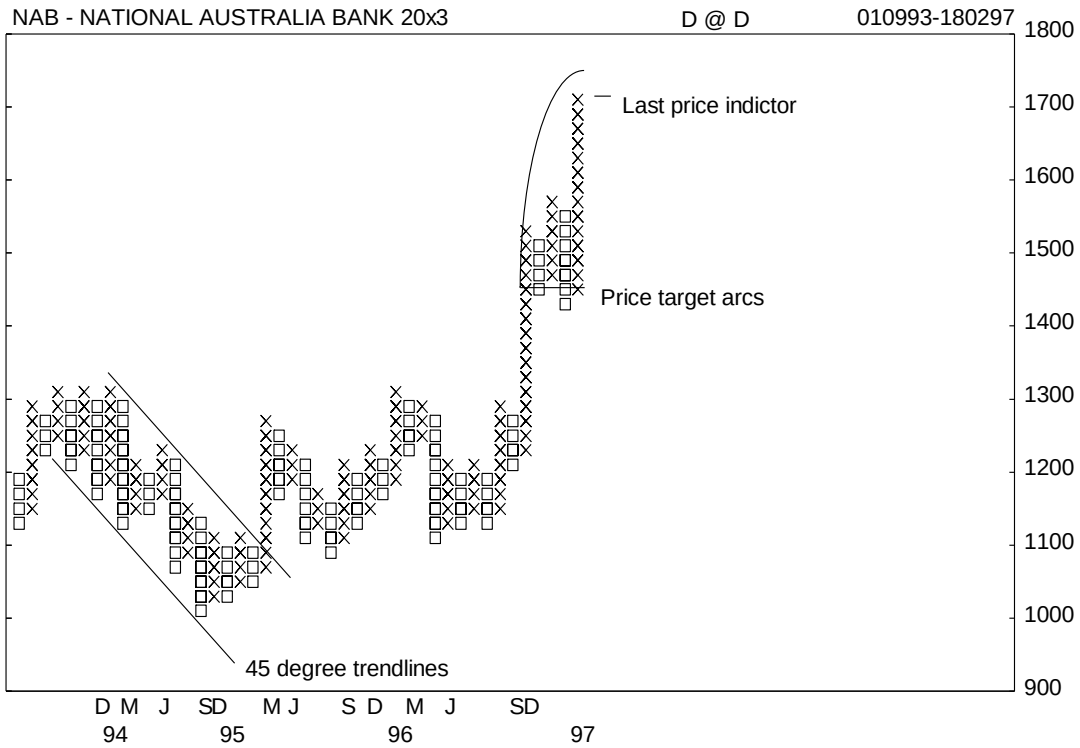


Fig 2.23

With point and figure charts you can also draw elliptical arcs indicating price targets from areas of congestion. Stretch the mobile trendline horizontally across the area of congestion and press the PgUp or PgDn keys to get your price target up or down.

The arc so produced is mobile like a simple trendline and can be moved around the screen by dragging on its two reference points at the ends of the line or at its midpoint to move it bodily.

Both the 45 degree lines and the target arcs are set in place just like a simple trendline and can be saved to disk with your point and figure chart for later retrieval.

Cycle Grids

You can overlay a regularly spaced time grid on your charts by clicking **Cycles** - button 3 of *Drawing tools* on the floating toolbar. Alternatively you can use the speedkey **Ctrl C**. The word **Cycles** will show in the status bar indicating we are in Cycles mode.

Click the mouse cursor on the point at which you wish to position the first cycle reference gridline and move the cursor to the right dragging the second reference gridline. The reference gridlines are shown dotted and the actual reference points on these gridlines are joined by a line. These reference gridlines actually span four cycles to make the positioning of closely spaced grids more accurate. When you have positioned the second reference gridline to where you wish just click the left mouse button.

Like the trendline this grid is still mobile and can be moved by dragging either end of the joining line or dragging the midpoint of the joining line to shift the whole grid bodily to a new position. When you are satisfied with its position set the grid in place by clicking the right mouse button and using the **Choose colour** dialog box or the **1-9, 0** speedkeys as explained for trendlines above. A figure representing the number of days between gridlines is shown adjacent to the second reference point.

Fans Retracements X-projections Y-Projections

Fans, retracements and X- and Y- projections are other constructions that are manipulated and set in place similarly to the trendlines, arcs and cycles that we have discussed. They are accessed from the buttons 4-7 of *Drawing tools* on the floating toolbar ie **Fibonacci/Gann Fans, Fibonacci/Gann retracements, Fibonacci time projections, Fibonacci price projections.**

Alternatively, before you enter lines mode, the respective speedkeys **Ctrl F**, **Ctrl R**, **Ctrl X** and **Ctrl Y** can be used to rapidly enter these modes. Like Lines and Cycles each of these structures has two reference points and can be manipulated and set in position in an identical way.

Shapes

There are also available four *Shapes* that you can use to highlight aspects of your charts. These are a circle/ellipse, arrow, rectangle and round rectangle.

Deleting Trendlines and Other Structures

Once you have set a trendline or other structure on a chart it is possible to delete it. Place the mouse arrow cursor over the line joining the (invisible) reference point handles, hold down the **Ctrl** key on the keyboard and **Right Click**.

Editing Trendlines and Other Structures

It is also possible to edit it a trendline or other structure on a chart. Place the mouse arrow cursor over the line joining the (invisible) reference point handles and **Right Click**. The structure will then become mobile with visible handles and you can move it, resize it and set it again in a different colour.

Extending Trendlines

Trendlines may be extended by going into Lines mode, placing the cursor over the line you wish to extend and pressing the **+** key. Pressing the **-** key will shorten the trendline instead.

Spawning Trendlines

Place the mouse arrow cursor over the line joining the (invisible) reference point handles of the trendline or other structure, hold down the **Shft key** on the keyboard and **Right Click** and an identical (but mobile) line will be created that will jump away from the first for you to position it where desired.

Alternatively from Lines mode you may spawn a trendline parallel to an existing one by placing the cursor over the line and pressing the **S** key. A dialog box will appear requesting you to specify the length as a proportion of the existing one. You can choose to have one of equal length or one which is a Fibonacci ratio of the existing one or one of custom length.

Other Operations in Lines Mode

There are a number of other operations apart from drawing trendlines that are possible from within Lines mode. These include zooming, a window showing data, a window showing the Y-value of the cursor, a window showing percentage retracement from two fixed points. But first we will examine how to change the form of the lines cursor.

The Lines Cursor

After Lines mode has been entered the cursor which appears is:

(i) the normal Windows arrow

This can be changed into a:

(ii) vertical line
(iii) horizontal line
(iv) crossed vertical and horizontal lines

by pressing the spacebar. Repeated pressing will cycle through the four options.

The cursor remembers its last position in Lines mode enabling you to set the cursor position, switch charts, and reestablish the cursor at the same place on the screen.

Horizontal and Vertical Lines

The Lines cursor can be moved around the screen with the cursor keys or the mouse to the desired position for the start of the line. Pressing **V** or **H** at any time will draw a vertical or horizontal line, respectively, through the current position of the cursor.

Unless the cursor is taken down into the subchart, vertical lines will only extend to the main chart. If the cursor is taken below the horizontal axis of the main chart, pressing [**V**] will cause the vertical line to be drawn from the position of the cursor to the top of the main chart.

Moving Data Window

From any active chart in the front screen click **Moving Data box** – the fifth button of *Data display* on the floating toolbar or button 39 of the main toolbar. This will take you immediately from the front screen, via the chart edit mode, into the Moving Data Window showing day of week, date, High, Low, Close and volume values (if these are available) corresponding to the date of the current cursor position.

Moving the cursor to different dates will change the data displayed in the window. You can move the cursor to highlight the next or previous bar by pressing the left or right arrow keys or rolling the mousewheel. Pressing the right mouse button will exit from this mode. The speedkey **Ctrl J** is the speedkey alternative and toggles between these two states.

The Y-value or price level of the cursor is also shown in the caption bar of the data window.

Fig 2.24

Y-value Window:

If speedkey **Y** is pressed while the Lines cursor is displayed, a window will appear showing the value corresponding to the vertical position of the cursor, which can be moved as described for the Data Window above.

Retrace Window:

The speedkey **R** will invoke the Retrace Window which requests you to set the first point. Move the cursor to a significant high (or a significant low) and press **ENTER** to set the first point. A marker will be left at this point and the cursor will jump to the right trailing a line. Then move the cursor to the second point, the complementary significant low (or significant high) and press **ENTER** to set the second point. The second point will be marked and the cursor will jump slightly upwards, again trailing the line.

The window will now show the values of the first point, the second point Fibonacci targets and the percentage retracement represented by the position of the cursor relative to the first and second points. The cursor can be moved around as described for the Data Window above with the percentage retracement represented by the current cursor position being continuously displayed.

Zooming using Lines Mode

In Lines mode you can stretch the mobile rubberband across the date range into which you wish to zoom and either double click the right mouse button or press **Ctrl W** and the chart will be redrawn to include the time period that you have bracketed with your line. This

zooming process can be repeated indefinitely or until the chart has been zoomed in to cover only one day.

NB These lines do not have to be placed on the axis nor do they have to be horizontal. It is convenient generally to span the actual data you want to include in the zoomed chart so the line will usually be at some angle to the axes. Autoswitching between daily/weekly/monthly displays can be disabled/enabled with the speedkey **Ctrl K.**

Text

Text can be positioned anywhere on the chart by invoking the Text mode with speedkey **Ctrl T** or by clicking **Text** - button 2 of *Drawing tools* on the floating toolbar. When in text mode the beam cursor (I) can be positioned to where you require the text string to start. Pressing **ENTER** or the left mouse button will allow text entry to commence and the cursor will jump to the left leaving a flashing caret.

Text is then entered as required, using the backspace **DEL** to remove incorrectly typed characters. Pressing **ENTER** or **Ctrl ENTER** will complete text entry on that line. The cursor is then moved to the commencing position for the next string and the process repeated. When all required text strings have been completed **ESC** will exit the Text mode.

The difference between completing the line of text with **ENTER** or **Crtl ENTER** is that, in a saved chart, text that has been completed with **Ctrl ENTER** will always remain fixed in the same position on the screen while text completed with **ENTER** (the most common option) will move with the underlying data as new data is added to the database.

Also, moving text can be zoomed while fixed text disappears on zooming. Moving text is tied to the date and price location corresponding to a point just to the left of and above the first character in the line of text. Both fixed and moving text can appear on the one chart together.

Deleting Text

To delete text which has been set after **ENTER** or **Ctrl ENTER** has been pressed, it is only necessary to move the mouse arrow cursor over the upper left corner at the start of the line of text to be removed and **Ctrl Right Click**. Text can also be removed from saved charts using this method.

Editing Text

A text string may be edited by moving the mouse arrow cursor over the start of the line of text to be edited and **Right Click**ing. A flashing caret will appear on the end of the text string and the editing operation can commence. Press **ENTER** or **Ctrl ENTER** to accept the changes.

Dragging Text to a New Position

You can drag text with the mouse by placing the arrow cursor over the upper left corner of the text string holding the left mouse button depressed while dragging it to the new location. When the left button is released the text will disappear from the old location and reappear at the new position.

Temporary Overlaying

Overlaying

From the Chart Edit Window it is possible to temporarily overlay one chart or one indicator on another. However, such temporary overlays cannot be saved to disk but are useful for on the spot comparisons. Permanent overlaying is achieved from the main toolbar as described previously.

The floating toolbar has an **Overlay** button at position 7 of *Axes*. The speedkey **O** will also put you into overlay mode which means that the next chart that you plot on the Chart Edit Window will be overlaid on to the currently displayed chart. This can sometimes be used for example for overlaying a bar chart on a point and figure chart of the same security or overlaying one indicator on another. Note that charts overlaid in this manner cannot be saved as replays. If an attempt is made to save an overlayed chart then it is only the second chart that will actually be saved.

Permanent overlaying is done as described earlier in this chapter using the **Overlay charts** button in the main toolbar.

Locking in the Existing Y-Scaling

If you wish to set the Y-scale for subsequent charts drawn in the Chart Edit Window to be that which is currently displayed then click the button 8 of *Axes* on the floating toolbar **Lock Y scales**. The Y-scale will then remain fixed for any other charts drawn subsequently. This is a toggle and will therefore also release the lock. The corresponding speedkey is **Z**.

You might for example wish to overlay the bar chart of ANZ on to a point and figure of the same security as mentioned in the paragraph above but with exactly the same Y-scales. Draw the point and figure chart and then, using speedkeys, press Z to lock in the Y-scale displayed, then press O for overlay and then B for bar chart. The bar chart will then be overlaid on to the point and figure and the Y-scales will correspond.

Events and Reversals

Astronomical and Other Events

There is a belief amongst many traders that astronomical events such as new moons, full moons eclipses and other events have a significant influence on market behaviour and that many major turning points can be correlated with such events.

Insight Trader provides a facility for Grids of EVENTS to be overlaid on to any chart so that for example, lunar phases, eclipses, elections, earthquakes or anything that you like for that matter can be compared with market action. It is only necessary to create an ASCII file using a text editor or a wordprocessor and saving the file as an ASCII or text file. Save it with a filename EVENTnn.DAT (where n is any digit 0-9) with a heading such as New Moons and a list of dates below in the format ddmmyy. For example:

New Moons

230512

281113

130614

... etc

Save this file into the \WINIT directory. At any later time a series of grid lines at these dates can be overlaid onto any chart just by pressing two keys in the range 00-99 while the chart is displayed. (There is an event button also on the floating toolbar). By specifying a shift in days when prompted, the grid will be displaced by this amount. These grids will be saved if the chart is subsequently saved as a replay file. The following files have been provided:

EVENT01.DAT	New Moons	press 01
EVENT02.DAT	Full Moons	press 02
EVENT03.DAT	Lunar Eclipses	press 03
EVENT04.DAT	Solar Eclipses	press 04

These files will need to be updated periodically using the Notepad editor above.

EVENT09.DAT and EVENT10.DAT are reserved for use by the systems profitability tester to overlay a grid of the buy and sell events on the chart of the security being tested .

EVENT05.DAT to EVENT08.DAT and EVENT11.DAT to EVENT99.DAT can be constructed by the user for whatever purpose is required.

R - Reversals

Reversals are available from button 2 of *Detection* on the floating toolbar - **Reversals**. Speedkey access is by pressing **R** from any chart. This will allow the chart to be redrawn showing reversals, Key reversals, LHC and HLC events. These events are as defined by Bernstein in his book "A Handbook of Commodity Cycles - a Window on Time". Reversals are toggled off using the same commands.

These events will be indicated on the chart by the following characters:

up/down arrow	-	upside/downside reversal
K	-	key reversal
*	-	HLC or LHC event with reversal

This facility only operates if an HLC bar chart has been selected.

J - Pivot Points

Pivot points are available from button 3 of *Detection* on the floating toolbar or via speedkey on any chart by pressing **J.** Enter the number of periods required to confirm by a close under or over the required low or high. Click the toolbar button or press **J** again to toggle the option off. If the periods to confirm are different between the toggling on and the toggling off then the pivot points on the longer confirmation that do not also occur on the shorter will remain displayed. This allows differences to be identified.

The Undo Facility

There is an undo facility that will allow you to reverse the last 100 changes that you have made on the current chart. You can actually move backwards and forwards through the sequence of screen changes that have occurred since you last switched to that window.

- Press the **Backspace** key to go to previous saved states
- Press **Ctrl Backspace** to go forward to newer saved states
- Switching from one child window to another in the front screen will reset the buffer of saved states (ie all but the current state is lost

Portfolio Information Displayed on Charts

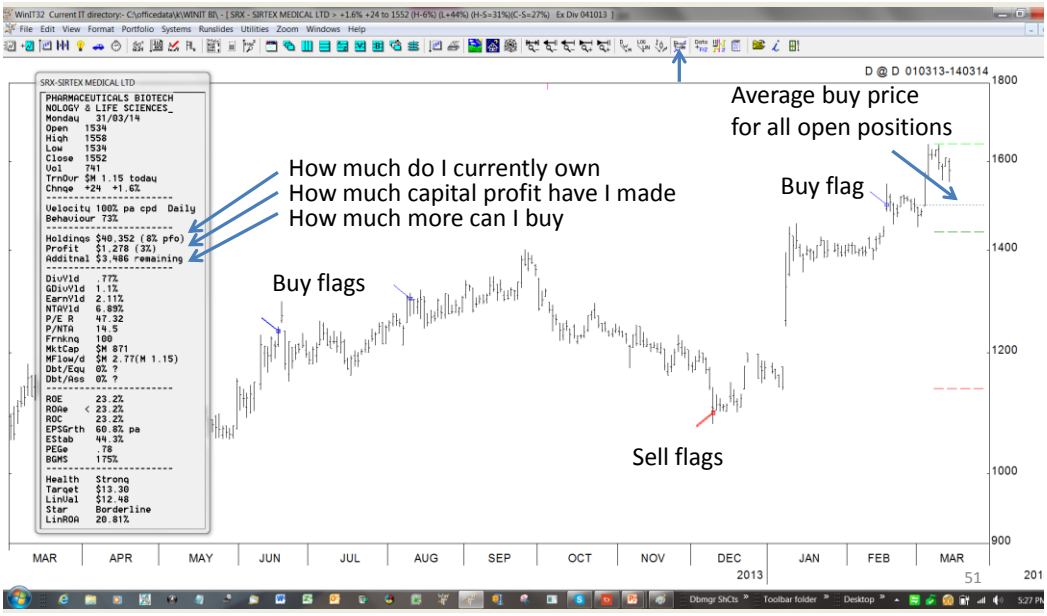


Fig 2.25

A "Show Trades" button 37 on the main toolbar allows you to toggle on and off certain portfolio information on the charts so long has you have already previously loaded a portfolio. This portfolio information includes the average price paid on any existing open positions, buy and sell transaction flags as well as information on your current holdings of that security, the capital profit to date and the maximum additional amounts that can be purchased without violating your risk criteria as set in the Risk Calculator.

Buy and Sell flags and Average Price Paid

If the security displayed on the existing active chart has open positions in the portfolio that you have currently loaded then a short dotted line will appear on the right hand side of the chart at a price level equal to the average price paid for the securities that you currently hold.

If the security is one that exists in your portfolio either as a current holding or a previous holding then your buy and sell trades are automatically flagged on the chart as tiny squares on the relevant bars or candles at the price level that you paid and on the exact date of the transaction. This means that on weekly or monthly charts these flags might appear between bars which are situated at the end of the relevant period. Changing to a daily display will allow each flag to fall on its respective daily bar. If there have been any capital adjustments to the chart following the transaction dates then the price levels of the squares will be adjusted accordingly. The actual prices paid can be shown if you change to the unadjusted chart.

Buy transactions have a short trailing tail attached to the square that points up at about 45 degrees and are given the same colour as that which has been set for the point and figure

crosses. Sell transactions have a trailing tail that points down and is given the same colour as the point and figure squares.

Profit, Holdings and Maximum Additional Purchase

When you are reviewing charts the extended F12 data box can display the value of your existing holdings in that stock as well as the profit and the maximum extra amount that it is possible to add to your holdings consistent with your risk management settings in the Risk Calculator and the last recorded price. So long has you have already previously loaded a portfolio there will be displayed on the F12 databox, underneath the Velocity and Behaviour Index figures for a charted security the current value of your existing holdings in that security, the current capital profit as well as a value representing the amount that can be added to your existing holdings of that security in the loaded portfolio without violating any of your risk management limits. A sell stop price must have been already set (stoploss) for that security for this display to appear.

If the security is not a current holding in your loaded portfolio there will be displayed the maximum holding permissible under the limits of the risk management criteria specified in your Risk Calculator settings. However, it is essential that a sell stop price (stoploss) has been set for that security otherwise this display will not appear.

Chapter 3

Indicators

Overview

Indicators are nothing more than derivatives of the raw price and volume information that you see on a bar chart. Although in reality indicators provide no more information than is present in the raw data they do offer an alternative way of looking at it.

There are two main types of indicator:- (i) trend following indicators and (ii) oscillators. Trend following indicators such as moving averages are intended to allow you to identify and stay with a trend. Oscillators like RSI on the other hand are most useful when the price is moving between the limits of a trading range and they can define prices as being "overbought" or "oversold".

For convenience we will divide our indicators into four groups:

(i) Global Indicators

(ii) Moving average type indicators plotted on the main chart

(iii) Volume based indicators shown in the subchart

(iv) Other indicators shown in the subchart

Setting Indicator Parameters

Indicators often require parameters such as time constants to be specified. These can be set by accessing the **Default parameters for indicators** dialog box. There are four ways to do this:

(i) From button 7 **Time Constants** on the main toolbar

(ii) From **View** on the main menu and choosing the item **Time constants**

(iii) From **Time constants** - button 1 of *Data display* on the floating toolbar.

(iv) Pressing speedkey **Alt T**

The dialog box that appears is divided into four sections as shown below.

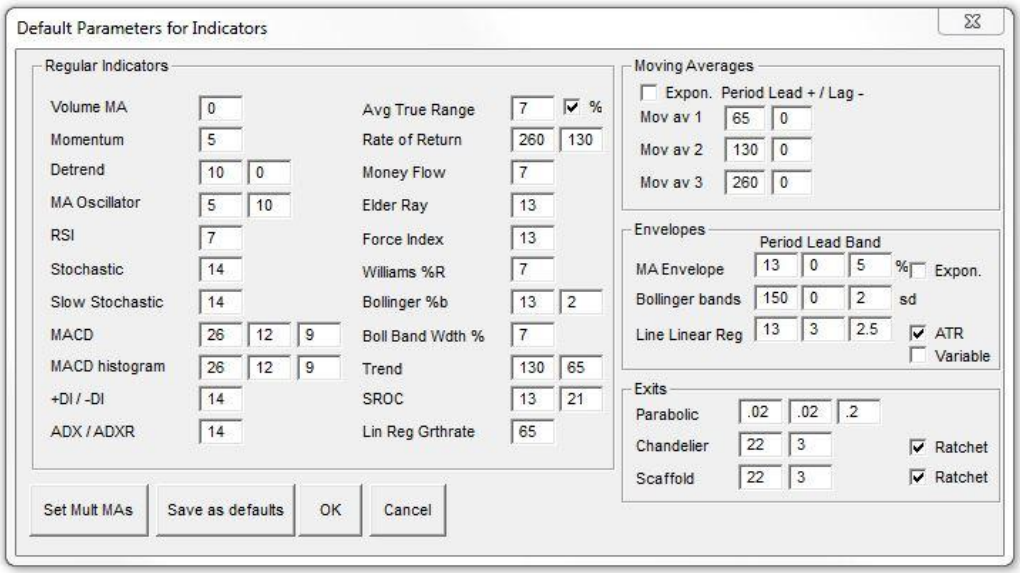


Fig 3.1

The first group on the left are the regular subchart indicators with provision for setting each of the respective parameters for all indicators.

The triple moving averages are set in the top right with any leads/lags or exponential if appropriate.

In the middle right you can set the parameters for the range indicators that define envelopes. Included are any leads/lags, bandwith sizes and other options

The **Set multiple MAs** button allows you to set time constants for two sets of 9 moving averages - a short term set and a long term set

If you click **OK** these changes will be operative only during your current session. If you press the **Save as defaults** button they will be the new defaults every time you open the program.

The Global Indicators of Velocity and Behaviour

There are two proprietary indicators that we consider are sufficiently important that we have made them global within the program. These indicators have been developed so that, when used in combination with fundamentals, they may assist the user to identify stocks that are financially sound, well behaved and that are rising strongly in price. These indicators we have called Velocity and Behaviour.

Velocity is a single value measuring the rate of price increase for any security based on the compounding rate of price growth from three different time frames

Behaviour assesses a type of statistical volatility that is not captured by traditional measures such as ATR or Bollinger and acts so that the smoother the price change over time *compared with the rate at which it is rising or falling* the closer this indicator approaches 100%.

The parameters for Velocity and Behaviour are set separately from other indicators under Format/Define Velocity from the main program menu. Whenever these indicators are accessed they take their parameters from this setting which cannot be altered elsewhere. The three time frames are user configurable with defaults of 65, 130 and 195 days with equal weightings but you can adjust these settings to suit your requirements.

Velocity and Behaviour are implemented as both subchart indicators and system functions. The latest values of these indicators are also displayed on the F12 notepad for the currently active chart. In the Portfolio Manager main summary screen each of your holdings will display the latest values of both these indicators for its relevant security. When you run a Systems scan the report includes columns for both Velocity and Behaviour and the report itself is always ordered on Velocity so that the fastest moving stocks are at the top of the list and are presented first when the list is charted. In addition toolbar buttons are provided on the main Insight Trader window to allow you to order an arrangement of charts by Velocity or by Behaviour.

Velocity

Velocity is intended to provide comparative measures of the compounding rates of price increase or decrease for different securities that are not easy to discern from direct observation of their charts because charts scale automatically. Velocity is expressed in terms of percent per annum compounding (%pa cpd) and can range from minus 100 %pa cpd to plus several thousand %pa cpd. If for example a security displayed a velocity of 100%pa cpd what this means in practical terms is that if it continued to exhibit the same velocity over two years then at the end of the first year it would have doubled while over two years it would have quadrupled in value.

Behaviour Index

The indicator Behaviour is always positive with values ranging from 0 to 100% and is intended to differentiate between those stocks exhibiting steady rises or falls in contrast to those displaying erratic wide swings likely to knock you out of positions by prematurely violating your stops. Good smooth price growth gives rise to Behaviour Index values approaching 100% while stocks exhibiting erratic short term swings which are large relative to the long term price growth rate give values for the Behaviour Index approaching zero.

You should be aware that high values of Behaviour will also be recorded for those stocks that are falling smoothly and steadily over time.

Note

Velocity and Behaviour included in F12 databox always show their values in a daily compression mode irrespective of the compression mode of the accompanying chart. However, their subchart indicators take the compression mode of the chart itself eg if compression of the chart is weekly then the parameter units of the chart indicator are weekly.

Moving Average Type Indicators

There are a number of indicators that can be classified as moving average type indicators (or main chart indicators) as these are plotted directly over the main price chart. The speedkeys for these indicators are Control keys. A moving average can also be placed on volume.

Moving averages

The moving average is perhaps the most popular trend following indicator. It is used to smooth out shorter term variations in price and other information to reveal the longer term underlying trend. The moving average is calculated at any point by a process of averaging a number of previous points subjected to a weighting procedure.

The longer the period of the moving average the greater will be the smoothing but the longer it will take for the moving average to react to changes in price and a large portion of the trend may well have been missed before it turns and gives its signal. Moving averages are therefore known as lagging indicators because of this inertia and the choice of a suitable period is a compromise between smoothing and reactivity.

Simple Moving Averages

The simple n-period moving average is arguably the most effective (see Colby and Meyers ref 8) and is calculated by summing the values for the previous n periods and dividing by n.

Exponential Moving Averages

The exponential moving average on the other hand weights and sums all previous values with more weight being given to the more recent values. The weighting factors can be varied such that the resulting moving average is roughly comparable to a simple moving average of n periods. So although all previous values are considered we specify an exponential moving average as an “n period exponential moving average” because the weighting factor chosen will give a result somewhat similar to an n period simple moving average.

Plotting Standard Triple Moving Averages

You can place a maximum of 3 standard moving averages on any one chart. Before plotting any moving averages it is important to have set the time constants on the **Default parameters for indicators** dialog box as described above. If you require only two moving averages set the time constant for the third moving average at zero (or leave it blank). If you only require one moving average then use the method below.

To plot moving averages retrieve the floating toolbar by placing the mouse cursor over the chart and pressing the right mouse button. Click **Triple moving averages** - button 2 of *Moving averages* and you will be asked to indicate whether you require simple or exponential moving averages and whether for standard or multiple moving averages. Enter as appropriate and click **OK** or press **ENTER**. The corresponding speedkey for this process is **Ctrl A**.

The **Reset times** button will retrieve the default parameters dialog box for review and change if required.

When regularly using the same three moving averages a quick method is to press **Ctrl A** and then **Enter**.

Fig 3.2

There is also provision to plot only a single moving average and this is button 1 **Single moving average**. The speedkey for this process is **A**.

Moving Average on Volume

By selecting the first button in the Volume Indicator group on the floating toolbar (or pressing speedkey **I** and then **1**) you will be requested to supply the number of periods for an exponential moving average on volume. Enter the number required and a moving average on volume will appear in the subchart. If you enter zero this will produce a volume chart with no moving average.

Plotting Multiple Moving Averages

To plot multiple moving averages ensure that you have set and enabled the long and short term time constants from the time constant form accessed through the speedkey **Alt T** .

Pressing **Ctrl A** will present the dialog allowing you to choose Multiple moving averages rather than standard moving averages. Two sets of moving averages of different colours - the long term set and the short term set will be plotted giving a maximum of 18 moving averages on the one chart.

Moving Average Envelopes

By placing a band around a moving average you can define a region on the chart where most of the price action will occur. If the price penetrates the boundaries of this region then the implication can be that something unusual is occurring such that prices are accelerating more strongly than normal. The band is calculated so that the upper limit is a given percentage above the moving average and the lower limit is the same percentage below the moving average.

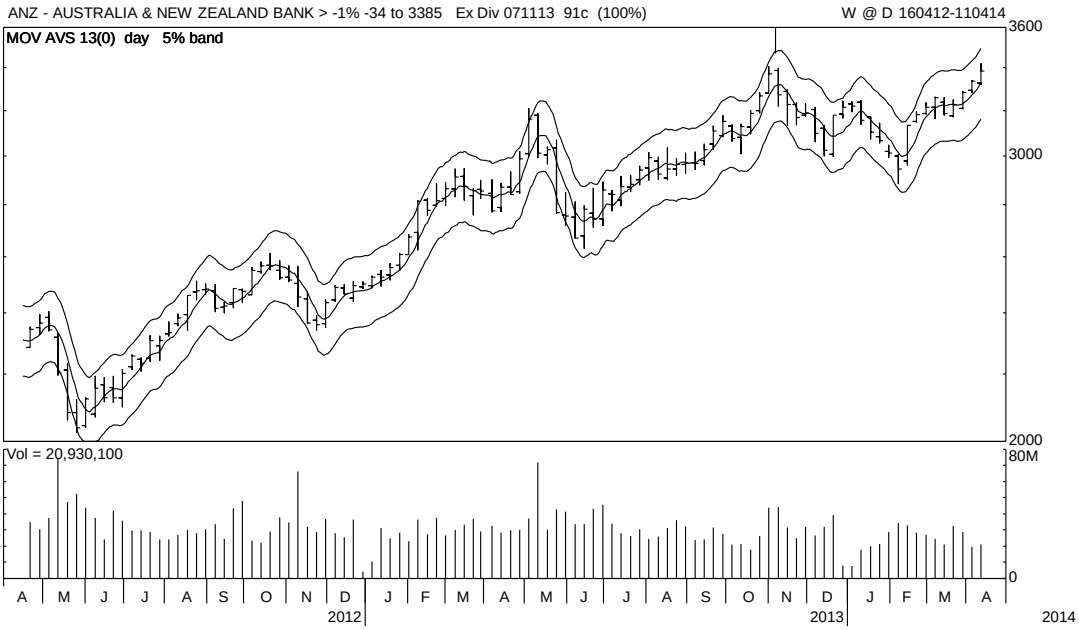

ANZ - AUSTRALIA & NEW ZEALAND BANK > -1% -34 to 3385 Ex Div 071113 91c (100%)
W @ D 160412-110414
MOV AVS 13(0) day 5% band
3600
3000
2000
Vol = 20,930,100
80M
0
A M J J A S O N D J F M A M J J A S O N D J F M A
2012
2013
2014

Fig 3.3

To access moving average envelopes retrieve the floating toolbar and click **Moving average envelope** - button 2 of *Range indicators*. The moving average time constant chosen will be the first moving average set on the **Time constants** form. You will then be asked for the percentage width of the band, which will vary with the volatility of the specific security, and to specify whether the moving average is to be simple or exponential.

AutoEnvelope

However, Moving Average Envelopes are by default created according to an automatic calculation that determines the percentage width of the bands. This calculation is based on the bands enclosing at least a certain percentage, say 95%, of bars completely within the envelope. Whenever the MA envelope option is requested 'Auto' will be displayed in the box for the 'Percentage band='. The automatic calculation can be overridden if preferred by replacing this with a specific number for the percentage band required.

You can alter the number specifying the default maximum percentages of the bars say 5% that can extend out of the envelope by calling up the 'Default Parameters for Indicators' dialog box and entering say '5' in the 'Band' field for 'MA Envelope'. This will ensure that no more than 5% of bars extend out of the envelope.

The corresponding speedkey for moving average envelopes is **Ctrl E**.

Bollinger Bands

Another type of envelope was developed by John Bollinger where the width of the band is not a fixed percentage of the moving average of a security but varies according to its volatility. It is set to be a number of standard deviations above and below the moving average.

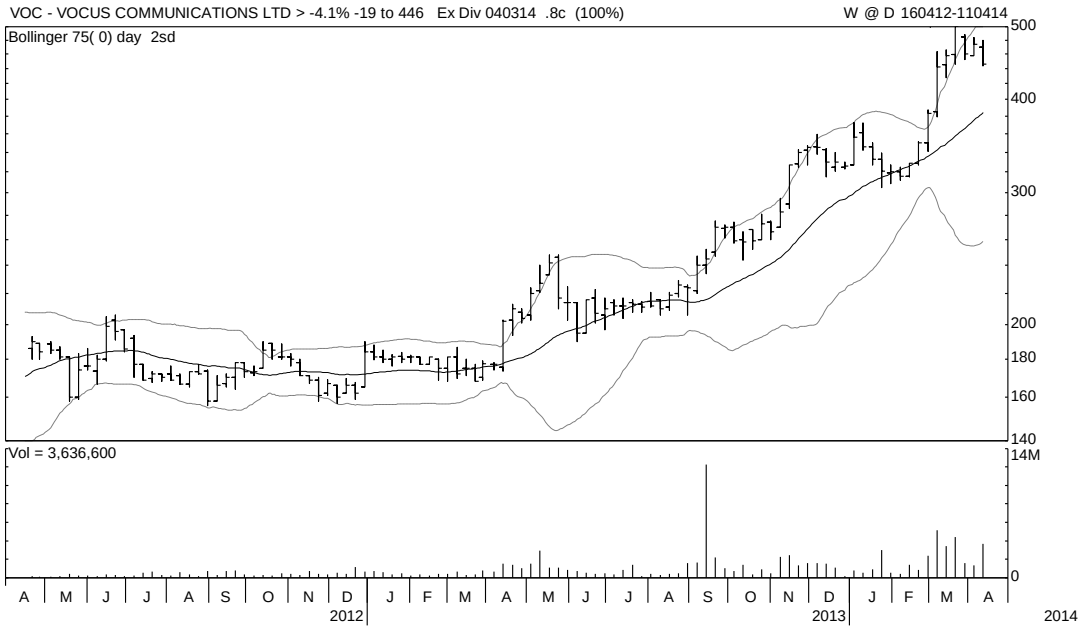


Fig 3.4

Bollinger bands are accessed by selecting **Bollinger bands -** button 1 of *Range indicators* on the floating toolbar . You will then be requested to enter the number of standard deviations for the bands. This defaults to 2. The speedkey for Bollinger Bands is **Ctrl B**.

Linear Regression

A linear regression calculation can be performed on all of the closing values on the chart by accessing **Regression line** – button 3 of *Moving Averages* or using the speedkey **Ctrl G** on any chart. The chart will immediately change to a line chart and display the regression line and its parameters (see Fig 4.4). These commands are toggles and will remove the regression line if accessed again. The speedkey **Ctrl Z,** which removes moving average type indicators, ratio and rebased mode also removes regression.

When a linear regression line is plotted on a chart the growth rate of the line is displayed viz:

- Grate = - the slope of the regression line in percent per annum compounding

Line of Linear Regression

The line of linear regression (not to be confused with the linear regression line just discussed) is the locus of the right hand end of a linear regression line segment drawn through a fixed number of closing prices. As the range of dates moves from earlier to more recent times the locus of the right hand end of the line traces out a curve that looks similar to a moving average. Alan Hull uses this line as a Range Indicator displacing it up and down from a central "cord" by a certain number of ATRs. This divides his chart into four distinct zones – a Sell Zone, a Buy/Hold Zone, a Profit Take/Hold Zone and a Profit Take Zone. To do this division into zones he uses a 13 week period displacing the upper line by 2.5 ATRs and the lower line by 3 ATRs. As part of his method the lower line is forced to "flatline" ie it is prevented from falling below the highest value that it has reached to date in accordance with the philosophy that a stop loss price should never be lowered under any circumstances. Since the Line of Linear Regression indicator as implemented here is as an envelope for general application, if the user wishes to employ it for the Hull Range Indicator it will be necessary to visually "flatline" the lower bound.

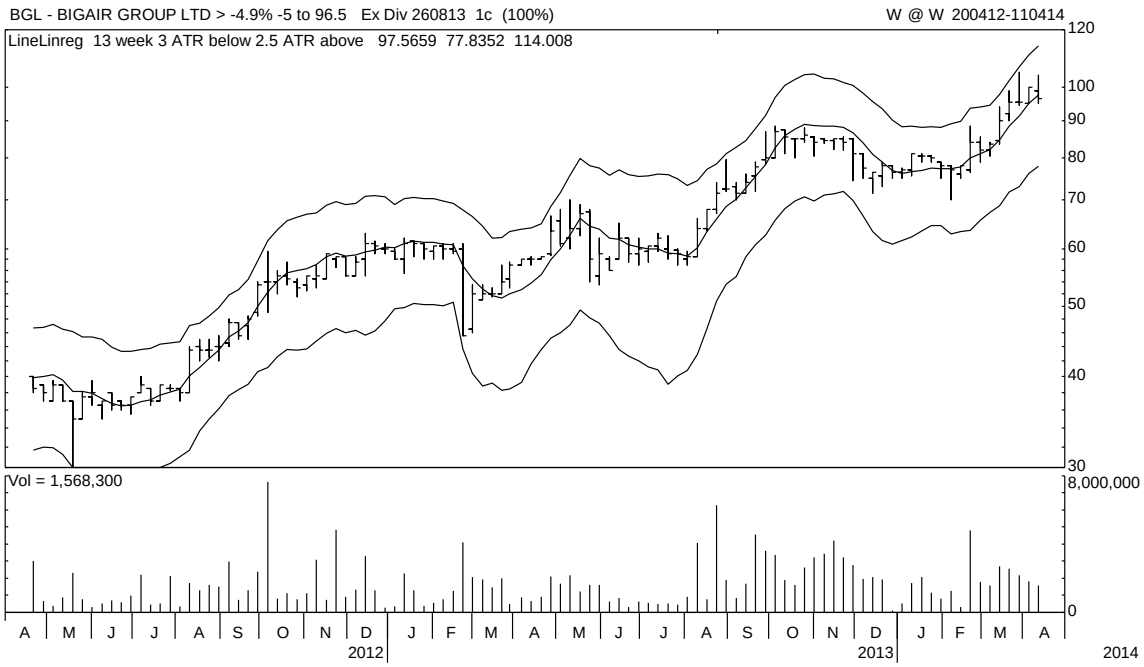


Fig 3.5

To access the **Line of Linear Regression** select button 3 of *Range indicators* on the floating toolbar or use the speedkey **Ctrl I**. You will be requested to input the required three parameters with defaults as indicated above. Click **OK** or press **ENTER** to accept.

This indicator has arguments for its period and its range displacements up and down for an envelope. Set both the latter to zero if you do not want an envelope. For a "variable" period as described by Alan Hull tick the appropriate checkbox and the period value will be ignored. If you want ATR displacements rather than % displacements then check the ATR boxes and enter the relevant number of ATRs for the upper and lower bounds.

Parabolic Stop and Reverse

Welles Wilder, the originator of many innovative trading indicators, developed the Parabolic Stop and Reverse System - SAR. It is so called because the system of stops when plotted resembles a parabola. When a trade is initiated a stop is set and is moved up incrementally each day in the direction of the trade, slowly at first but increasingly more rapidly so that the stop becomes progressively tighter. When the stop is hit the trade is reversed immediately to a trade in the opposite direction. As such you always have a position in the market.

There are three parameters required for this indicator for which the defaults are .02 .02 .2. The first parameter is the starting acceleration factor which is increased each day by an amount set by the second parameter up to a maximum of the final parameter. The acceleration factor determines the tightness of the stop.

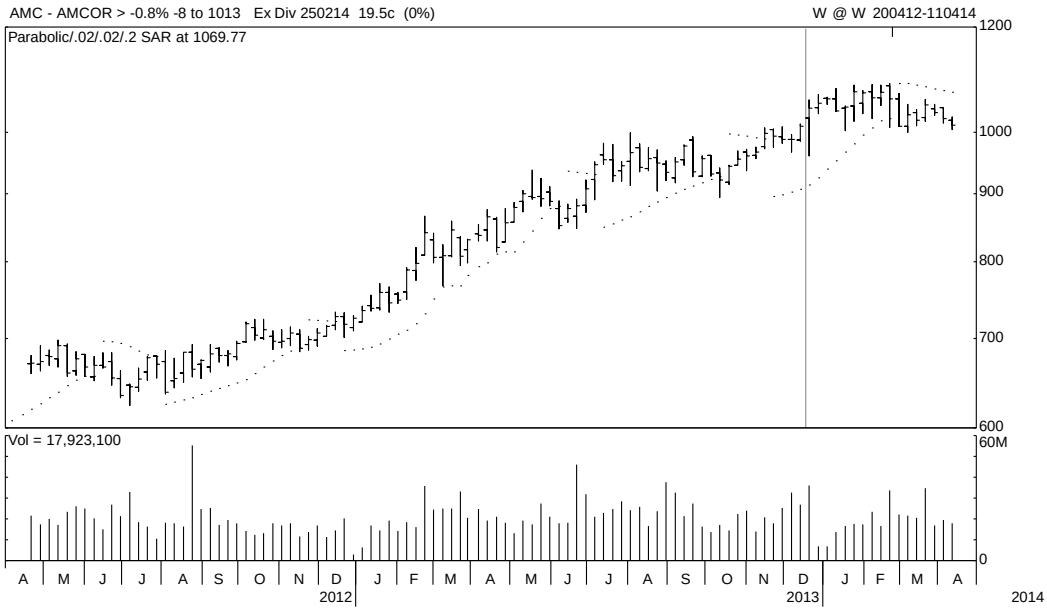


Fig 3.6

To access the Parabolic select button 1 of *Stop indicators* of the floating toolbar **Parabolic stop and reverse** or use the speedkey **Ctrl O**. You will be requested to input the required three parameters with defaults as indicated above. Click **OK** or press **ENTER** to accept. You will get a chart as shown above.

Chandelier Exit

The Chandelier Exit is designed as a stop indicator to trigger an exit from either a long or short position. It has been described by Alexander Elder in his book *Come into my Trading Room*. For a long position it sets a stop by taking the highest price reached in the previous, say, 22 days and then setting the stop to say 3 ATRs below this high. An optional ratchet can be set so that the stop can only be raised but never lowered. For a short position this works analogously but in reverse.

To access **Chandelier Exit** select button 2 of *Stop indicators* of the floating toolbar or use the speedkey **Ctrl M**.

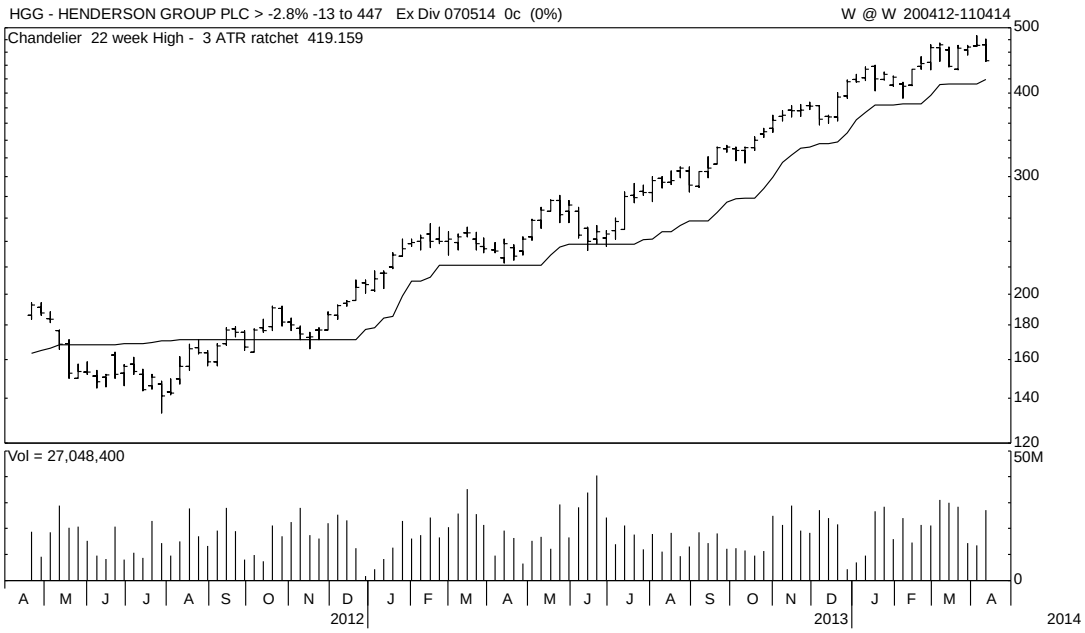


Fig3.7

Enter the period and number of ATRs required from the high. If you wish to ratchet the indicator (ie stop it falling) then tick the ratchet box. . Click **OK** or press **ENTER** to accept. When on ratchet the value of this indicator may initially "flatline" at different places depending on where you start the chart.

Scaffold Exit

The Scaffold Exit is very similar to the Chandelier Exit being designed as a stop indicator to trigger an exit from either a long or short position. The difference is that, for a long position, the stop is set from a low rather than a high. For a long position it sets a stop by taking the lowest price reached in the previous, say, 22 days and then setting the stop to say 3 ATRs below this low. An optional ratchet can be set so that the stop can only be raised but never lowered. For a short position this works analogously but in reverse.

To access the **Scaffold Exit** select button 3 of *Stop indicators* of the floating toolbar or use the speedkey **Ctrl U**.

Enter the period and number of ATRs required from the low. If you wish to ratchet the indicator (ie stop it falling) then tick the ratchet box. Click **OK** or press **ENTER** to accept. When on ratchet the value of this indicator may initially "flatline" at different places depending on where you start the chart.

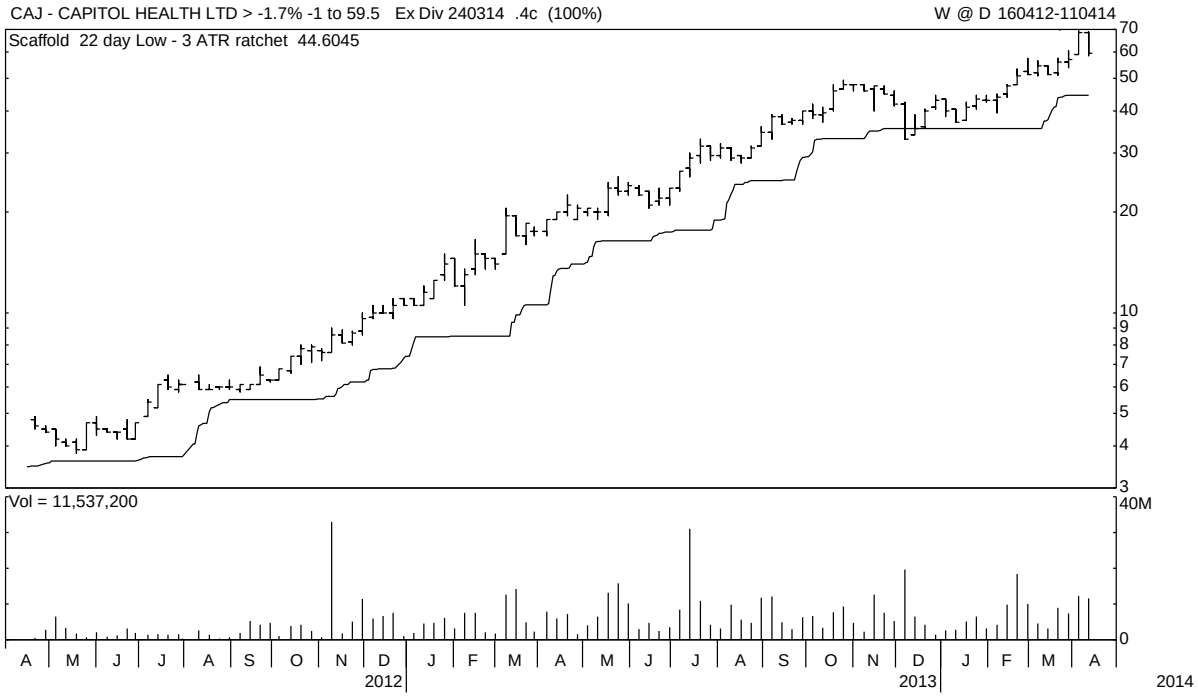


Fig 3.8

Removing Moving Average Type Indicators

Any of the moving average type indicators mentioned above can be removed from the current chart by pressing **Ctrl Z** or accessing the *Remove* button on the floating toolbar.

Volume Based Indicators

Volume

Although volume is raw data and not strictly an indicator it is included in this section for completeness as you will often wish to revert to volume in the subchart after having plotted other indicators there. **Volume** is accessed via the floating toolbar by activating button 1 of *Volume indicators*. The speedkey for volume is to press **I** to activate the menu for Indicators and then **1** for **Volume**.

If you wish to display an exponential moving average on your volume then enter a non-zero value for the number of periods in the dialog box that appears.

Fig 2.3 from the last chapter shows volume as a histogram for a daily chart.

On Balance Volume

Joe Granville originated the concept of On Balance Volume. It is an example of an accumulation index where one starts with an arbitrary large number and adds or subtracts a variable incremental value each day. On Balance Volume simply adds the volume for the day (or other period) if the day's close is above the previous day's close or subtracts it if it is below. An increasing On Balance Volume is claimed to indicate that strong hands are accumulating and a declining OBV that strong hands are distributing.

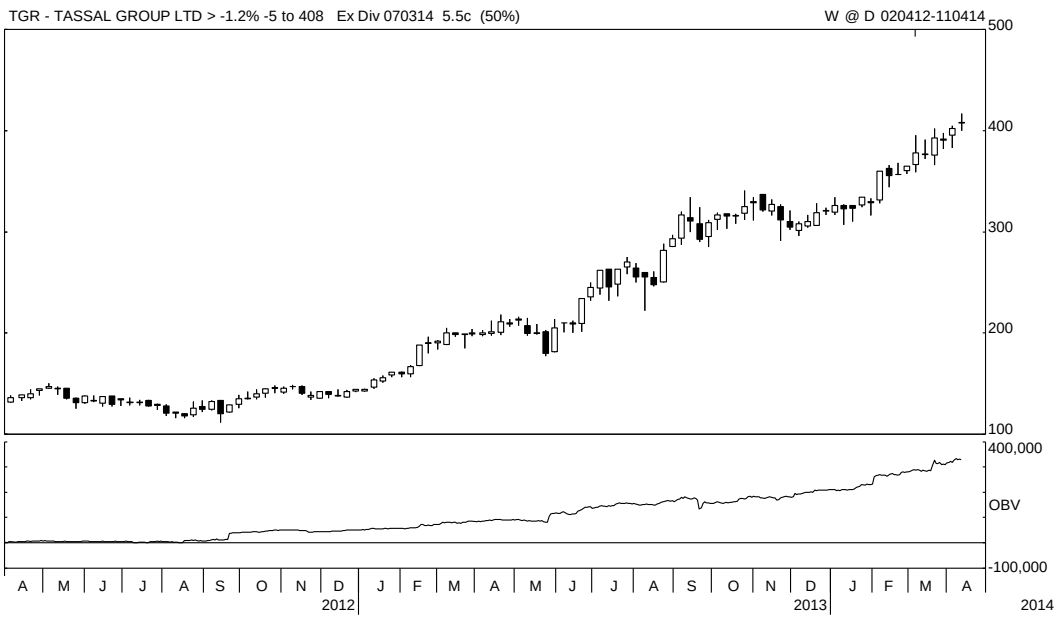


Fig 3.9

OBV is accessed by clicking **On balance volume -** button 2 of *Volume indicators* on the floating toolbar . The speedkey is **I** for the Indicator menu then **2** for OBV. No parameters are required.

Volume Accumulation

Volume Accumulation was developed by Marc Chaikin and is an accumulation indicator similar to OBV except that only a proportion of the day's volume is added or subtracted depending on whether the close of the day was above or below the midpoint of the day's range. The proportion is the proportion by which the close is above (or below) the midpoint on its way to the high (or the low). the interpretation of this indicator is similar to that of OBV.

Volume accumulation is accessed by clicking button 3 of *Volume indicators* on the floating toolbar. Using speedkeys press **I** for the indicator menu and **3** for **Volume accumulation**. No parameters are required for this indicator.

Volume/Price Trend Accumulator

This is another accumulation indicator based on volume but where the volume for the day is accumulated after weighting it by the difference between today's close compared with yesterday's close.

Volume/price trend accumulator is accessed by clicking button 4 of *Volume indicators* on the floating toolbar. Using speedkeys press **I** for the indicator menu and **4** for **Volume/price trend accumulator**. No parameters are required for this indicator.

Force Index

Force Index is a volume based indicator developed by Alexander Elder. It is an oscillator measuring the force of bulls behind every rally and the bears behind every decline. It is defined as the product of today's volume and the difference between today's price and yesterday's price. It is generally smoothed with an exponential moving average.

The Force Index is accessed from the floating toolbar by clicking **Force Index -** button 5 of *Volume indicators*. Specify the smoothing period required.

Speedkey access is via **I** for the Indicator menu and selecting **K Force Index**.

Other Indicators

Momentum

Unfortunately there are some inappropriately named indicators in the general category of momentum indicators that we will need to clarify.

A simple n-day momentum is just the difference between the price at a given time P_i and that n days previously P_{i-n} ie Momentum=P_i-P_{i-n}. (Momentum is also sometimes incorrectly referred to as price velocity. True price velocity would properly be defined as (P_i-P_{i-n})/n.)

This simple concept of momentum has limited usefulness because a high priced security rising by the same percentage as a low priced security over a given period will have a much higher momentum. This means that we cannot easily compare one security with another.

The so called **Rate of change** is a related indicator that has overcome this problem by being defined as the price at a given time divided by the price n days previous and will therefore directly compare different priced securities for the same value of n.

However, even so called **Rate of change** is not actually a rate of change at all (because it is a pure number with no dimensions of time) and should rather be called the **ratio of change** as it will not allow you to directly compare the rate of increase of price of a security for different time periods.

Assume for the sake of argument that you are looking at a security trading at 1000 cents that is increasing steadily by 100 cents every 5 days. The 5 day "rate of change" will be 1.1 but the ten day "rate of change" will be 1.2 even though the true "rate of change" is a constant 20 cents per day.

Insight Trader has redefined Momentum to be the true fractional rate of change in price so that we can directly compare different priced securities AND different time periods.

We define the n period Momentum as:

$$\text{Momentum}=(P_i-P_{i-n})/P_i/n*15$$

P_i is the price for the time period i, P_{i-n} is the price n periods previously, n is the time constant of the momentum. 15 is simply a factor to make the resulting numbers a manageable size and has the effect of making this definition of momentum to be equivalent to the true fractional rate of increase in price (per 15 days).

This definition of momentum will give the same value for all securities which have been steadily increasing in value by a fixed percentage per day of today's price irrespective of the original prices of each security and irrespective of the time period chosen for the indicator. It is a true fractional rate of change. For example if you get a 10 day momentum value for today of 0.05 this means that the price over the 10 days has increased at a rate of 5% (of today's price) per 15 days (ie 1/3% per day).

Over longer periods the price momentum of a security is better measured by the previously discussed global indicator of Velocity.

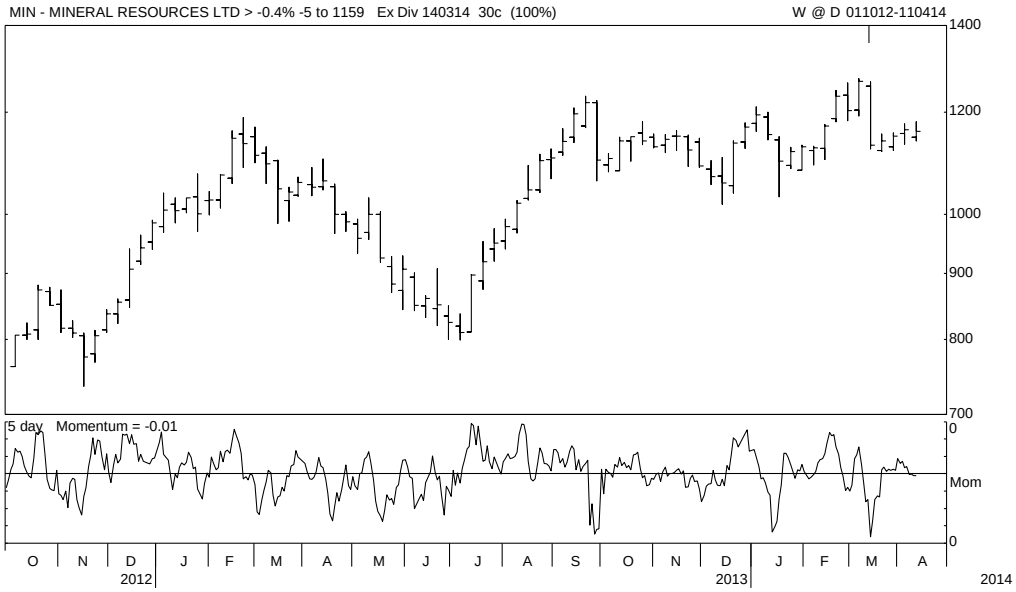


Fig 3.10

To access momentum click **Momentum -** button 1 of *Subchart indicators* on the floating toolbar and enter the required number of periods for the parameter. Alternatively use the speedkey **I** to access the indicator menu and **5** for **Momentum**.

Detrend

Detrending is the process of removing longer term cycles from a chart to reveal the shorter term variations which overlie these. Detrend is simply calculated by subtracting a moving average from the price. A moving average smooths out the shorter term variations and reflects only those longer term cycles. By subtracting this from the price we are left with the shorter term fluctuations with the underlying trend removed.

One can detrend by simply subtracting the moving average but sometimes it is better to lag the moving average by approximately one half of its period to "centre" it before doing the subtraction. Detrending is used frequently in cycle analysis to identify the shorter term cycles by removing the confusion of superimposed longer term cycles.

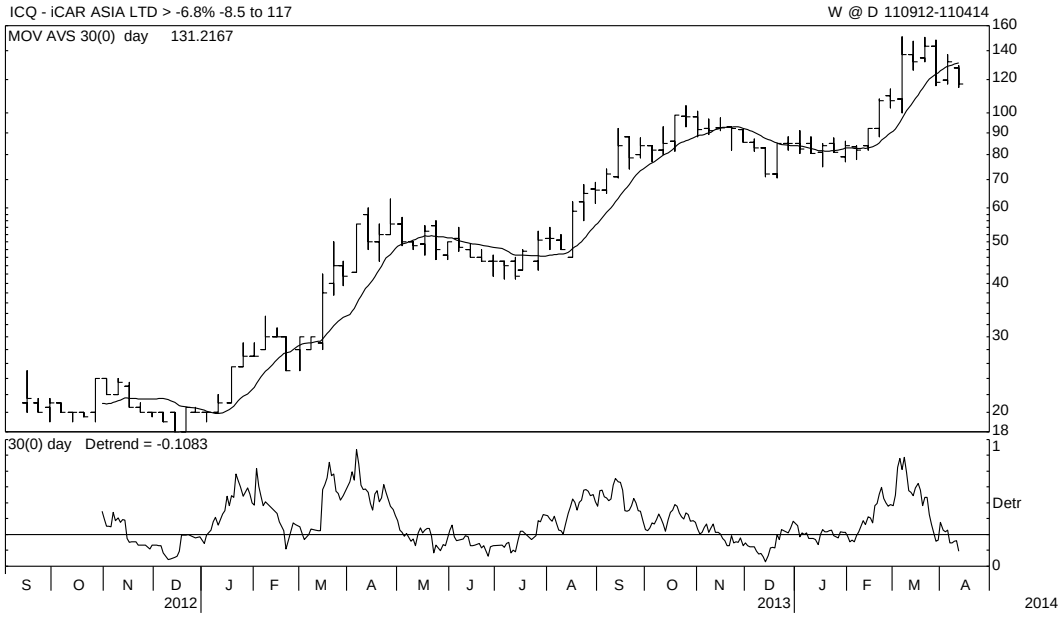


Fig 3.11

Detrend is accessed from the floating toolbar by clicking button 2 of *Subchart indicators*. A dialog box will then request the time period and also the lead or lag required. By speedkey you would press **I** for the Indicator menu then **6** for **Detrend**.

Moving Average Oscillator

A moving average oscillator is the difference between two simple moving averages of different periods. It allows moving average crossover points to be more easily detected and constitutes an oscillator in its own right. It is implemented in Insight Trader as a proportion of the value of the longer term average.

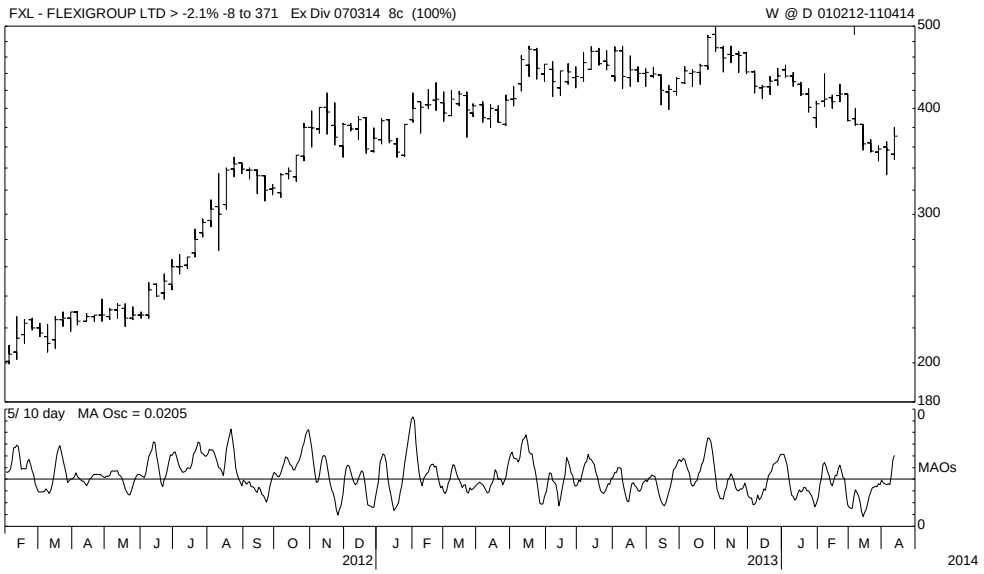


Fig 3.12

Moving average oscillators are particularly useful in pinpointing more accurately the crossovers of two moving averages and helping to detect divergences.

This oscillator can be plotted from **Moving average oscillator –** button 3 of *Subchart indicators* on the floating toolbar. Speedkeys use **I** for the indicator menu and **7** for the **Moving average oscillator**.

The moving average oscillator is implemented as the difference between the shorter moving average and the longer no matter in what order the time constants are entered.

Relative Strength Index

Relative Strength Index or RSI is probably the most popular of all oscillator type indicators. It was developed by Welles Wilder and *has nothing to do with the normal definition of relative strength* that is simply the ratio of one entity to another. RSI operates purely on, and requires only, the closing price.

Since the calculation of relative strength is fairly involved, for a detailed explanation it is best to refer to the original publication outlining its definition. However, for any period of n days, it is based on the ratio of the average points gained on the n days up closes to the average points lost on the n days down closes. The averages used are in fact exponential type averages and utilise all previous data.

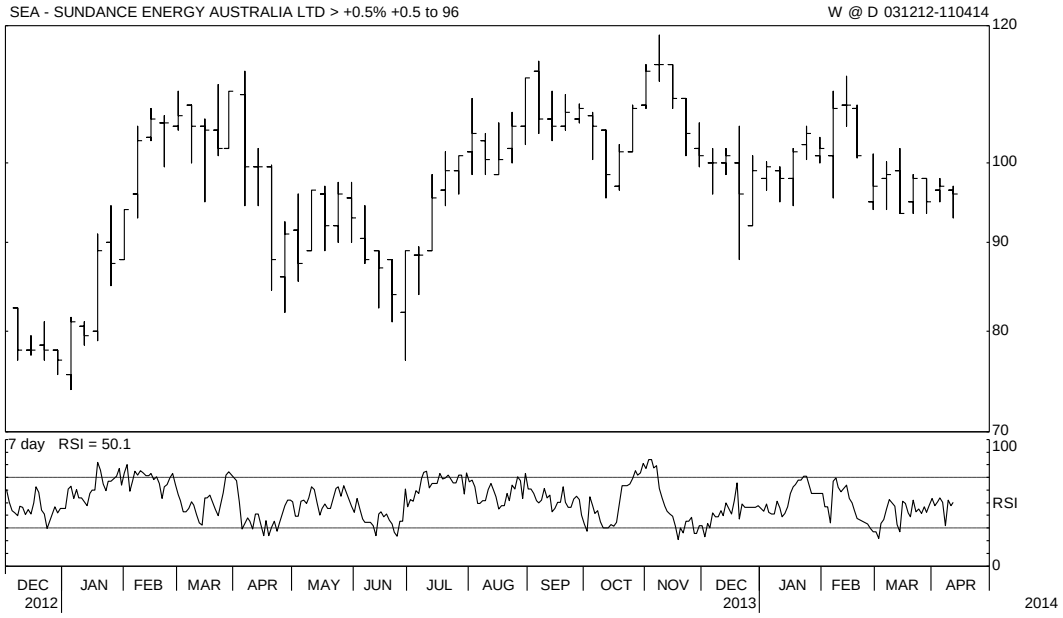


Fig 3.13

The oscillator fluctuates between 0 and 100 and any value above 70 is referred to as overbought and any value below 30 is referred to as oversold. The most important use of RSI according to Wilder is in identifying divergences when the oscillator is in these extreme regions. RSI requires one parameter and Wilder used a value of 14 days in his original work.

RSI - Relative strength index is accessed from the floating toolbar by clicking button 4 of *Subchart indicators* and entering the number of periods required. Speedkey access is obtained by pressing **I** for the Indicator menu and **8** for RSI.

Stochastic

The stochastic was developed by George Lane and is calculated on high, low and close for a given period. It is defined as the ratio of the latest close minus the low for the period and the high minus the low for the same period expressed as a percentage. This is referred to as the K line. The D line is calculated as the simple 3-day moving average of the K line. This indicator will obviously not calculate for close only data.

The two lines are plotted together on the same chart and vary from 0 to 100. Overbought and oversold regions are above 70 and below 30 as for RSI. Signals are given when the K line crosses the D line and when divergences are noted. The interpretation of the stochastic is quite involved and a full reading of the original text is suggested.

The stochastic is accessed from the floating toolbar by clicking **Stochastic** - button 5 of *Subchart indicators* on the floating toolbar and entering the number of periods required for the indicator. Speedkey access is obtained with **I** for Indicator menu and **9** for **Stochastic**.

Note that Larry Williams' %R is 100 - Lane's Stochastic %K.

Slow Stochastic

The slow stochastic is a smoothed version of the normal stochastic where the new K and D lines are simply 3 day smoothed versions of the K and D lines of the normal stochastic. This version of the indicator is generally preferred over the unsmoothed one which tends to jump around excessively.

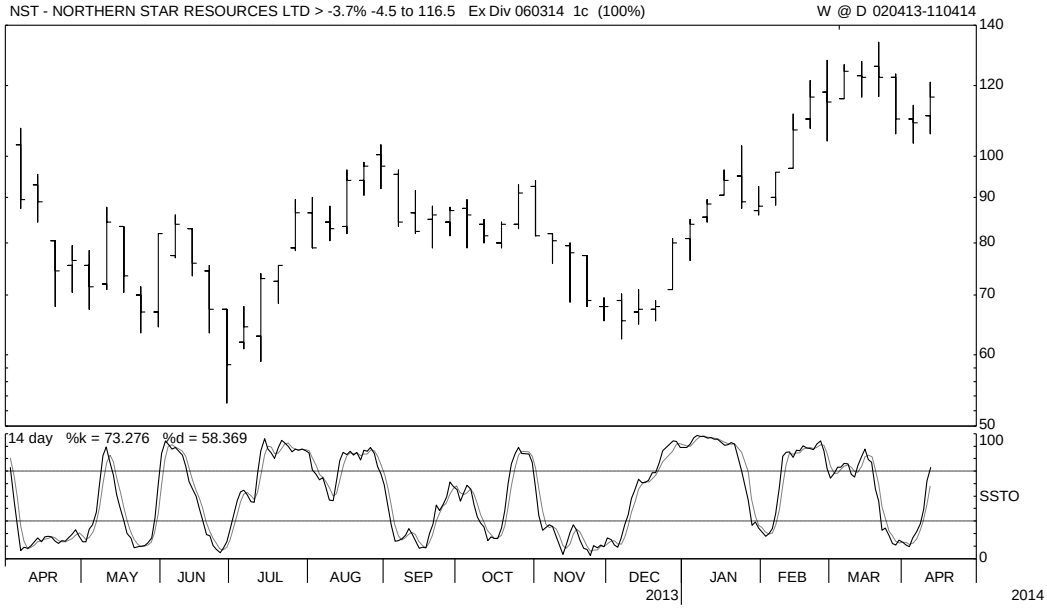


Fig 3.14

Slow stochastic is accessed from the floating toolbar by clicking button 6 of *Subchart indicators* and entering the number of periods required for the indicator. Speedkey access is obtained with **I** for Indicator menu and **A** for **Slow Stochastic**.

MACD

Moving Average Convergence Divergence (MACD) trading method was developed by Gerald Appel as a price momentum indicator. It is an oscillator calculated as the difference between the 26 period exponential moving average and the 12 period exponential moving average to give the first line. This difference is in turn smoothed by a 9 period exponential moving average called the signal line. Although these were the original periods suggested the user can experiment with other values.

There are a number of ways to interpret signals from this indicator that involve the shorter line crossing the slower line and also crossing above and below the zero line. Divergences can also be significant.

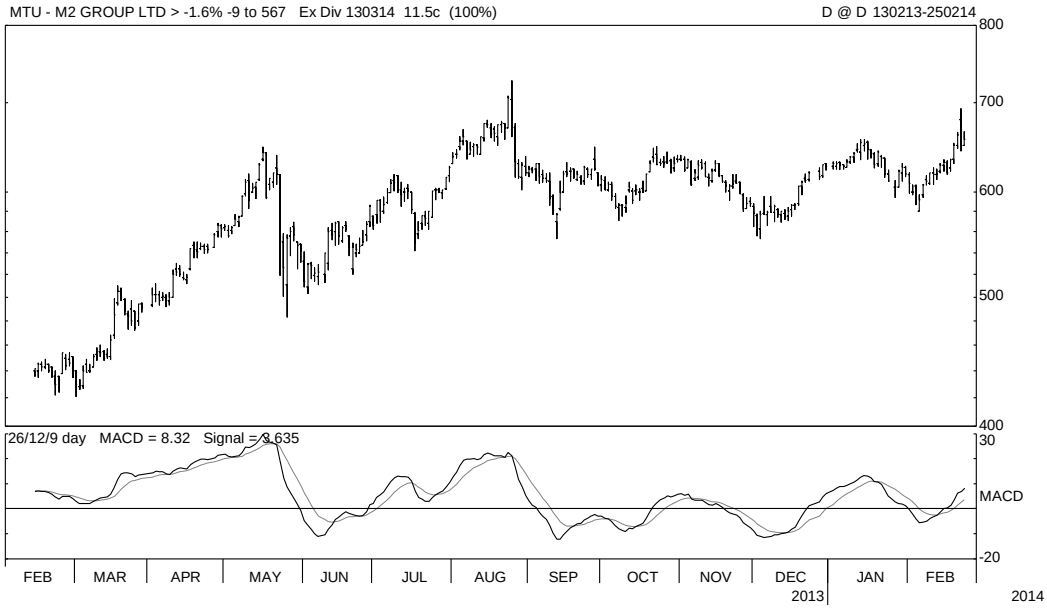


Fig 3.15

MACD - Moving average convergence divergence is accessed from the floating toolbar with button 7 of *Subchart indicators* and entering the three parameters required. Speedkey for this indicator is **I** for the Indicator menu and **B** for **MACD**.

MACD Histogram

The so called MACD "Histogram" is actually the difference between the two oscillator lines of the MACD traditionally presented in the form of vertical bars or a histogram although it can be equally well (and perhaps more conveniently) presented as a line chart. This indicator is used and interpreted by a number of authors in different ways and again it is best to consult these texts for details of the different approaches taken.

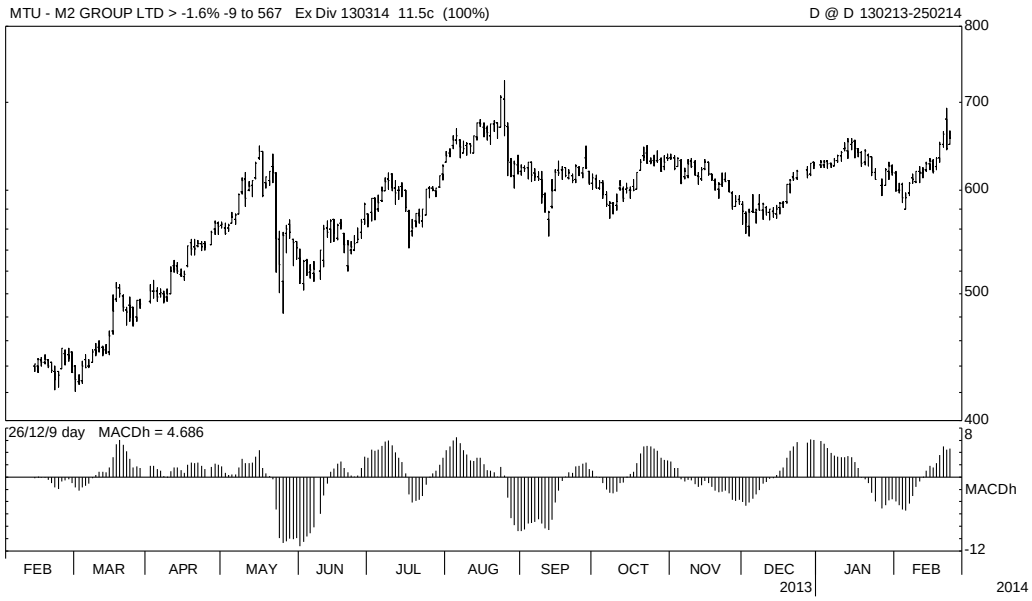


Fig 3.16

MACDH - MACD Histogram is accessed from the floating toolbar with button 8 of *Subchart indicators* and entering the three parameters required. Speedkey for this indicator is **I** for the Indicator menu and **C** for **MACDH**.

Directional Movement Indicator +DI -DI ADX

Welles Wilder is the originator of the Directional Movement Indicator or DMI which is designed to assess the degree to which a market is trending and allows comparison between the directional movement or trend in different markets. This is a fairly complex indicator to both calculate and interpret and the reader is referred to the original text for a more detailed treatment.

Two lines known as the +DI and -DI are generated, the first of which measures positive or upward movement and the second measures negative or downward movement. Some interpretations suggest that a buy signal is given when the +DI line crosses above the -DI line and a sell signal when it crosses below the -DI line.

There is a third line called the ADX or Average Directional Movement Index is an exponential smoothing of the Directional Movement or DM which is itself a function of +DI and -DI.

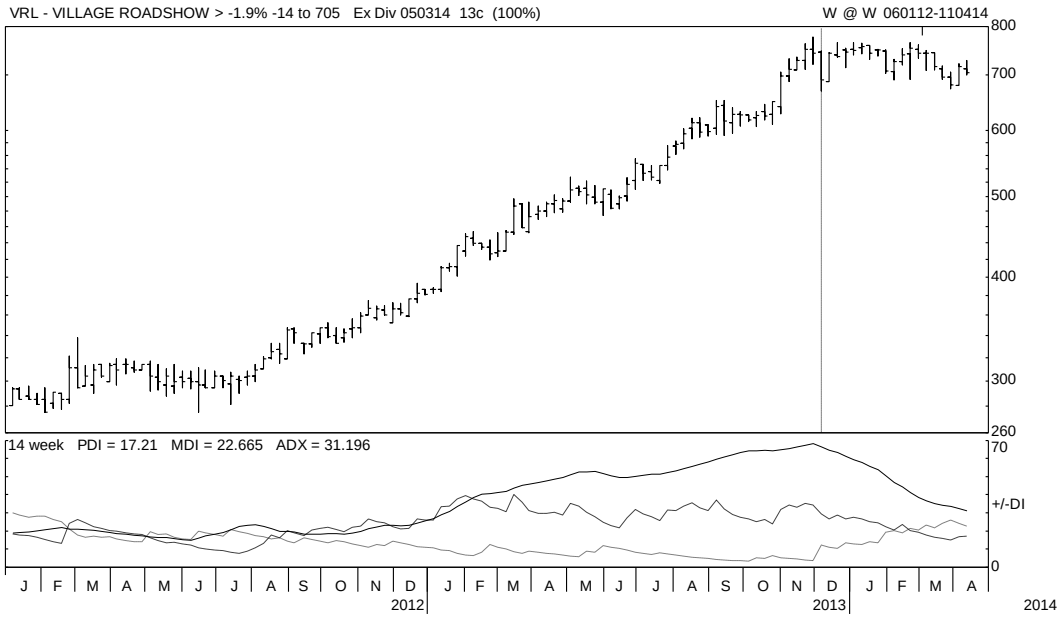


Fig 3.17

These three lines of the **Directional movement indicator - +DI -DI ADX** are accessed from the floating toolbar button 9 of *Subchart indicators*. The user is then asked to input the period required for which a suggested value is 14. Speedkey for these indicator lines is **I** for the Indicator menu and **D** for **+DI -DI ADX**.

Directional Movement Indicator ADX/ADXR

There is a further DMI line called the ADXR or Average Directional Movement Index Rating. This is the average of today's ADX and the ADX n days ago where n is the number of periods set for the parameter of DMI.

ADX and ADXR are plotted together in much the same way as a pair of signal and trigger lines.

These two lines of the DMI **ADX/ADXR** are accessed from the floating toolbar button 10 of *Subchart indicators*. The user is then asked to input the period required for which a suggested value is 14. Speedkey for these indicator lines is **I** for the Indicator menu and **E** for **ADX ADXR**.

Coppock

The Coppock Indicator is a ten month weighted moving average of the average of the fourteen month and eleven month simple momentums for an index. Ed Coppock's original suggested action was to buy or accumulate stock when the indicator was below zero. This is a long term indicator and was not intended as providing a corresponding sell signal.

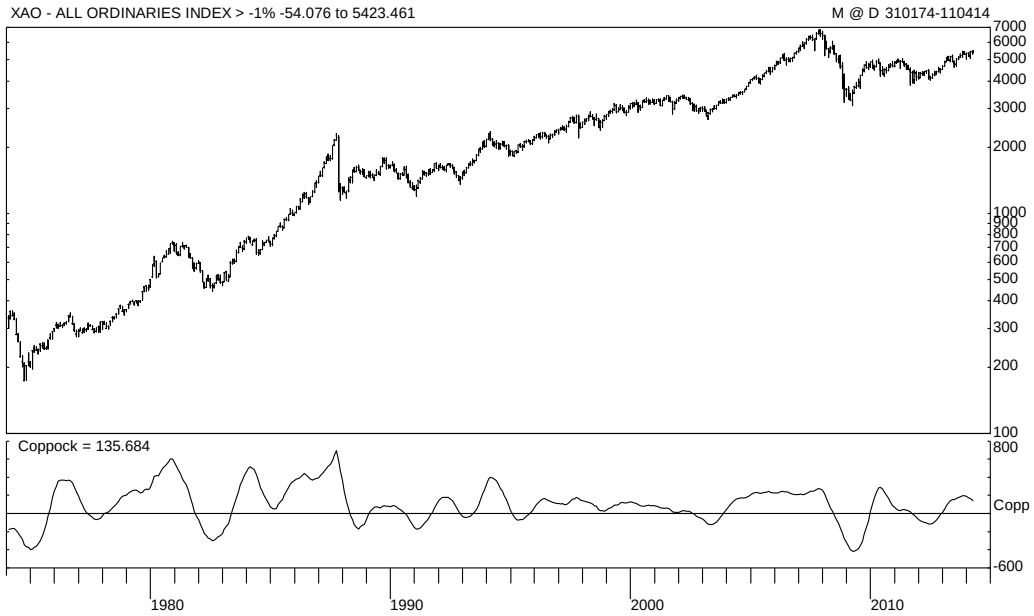


Fig 3.18

The **Coppock** indicator is accessed from the floating toolbar by clicking button 11 of *Subchart indicators*. There is no adjustable parameter for this indicator. Speedkey access is via **I** for the Indicator menu and selecting **F Coppock**.

Average True Range

Average True Range was concept introduced by J. Welles Wilder to measure the volatility of a market. **True Range** for a day is defined as the difference between its high and its low so long as the previous days close was inside this range. If the previous day's close was outside this range then we need to add to today's range either the amount that yesterday's close was above today's high or the amount that yesterday's close was below today's low – depending on what circumstances were applicable.

Average True Range is simply the average of all the True Ranges for a given number of periods. This measure is used extensively in technical analysis and in the application of many other indicators.

The **Average True Range** indicator is accessed from the floating toolbar by clicking button 12 of *Subchart indicators*. Specify the period and it will be plotted in its raw form or as a percentage of the price if the % box is ticked. Speedkey access is via **I** for the Indicator menu and selecting **G ATR**.

Rate of Return

The Rate of Return has been defined by Alan Hull as the proportional change in price of the Line of Linear Regression annualised from its period of measurement. The Rate of Return as implemented here has a definition slightly modified from the original (that had the current share price rather than the LLR as the denominator):

(LLR(now) - LLR(delta periods ago)) / LLR(now) expressed as an annualised percentage. This can be calculated using daily, weekly or monthly compressed files.

The Rate of Return attempts to measure how fast the price has been rising. It is expressed both proportionally and annualised – eg 30% pa - so that values obtained from different securities with widely differing share prices may be validly compared.

Fig 3.19

The **Rate of Return** indicator is accessed from the floating toolbar by clicking button 13 of *Subchart indicators*. Specify the period required for the underlying LLR and the separation, delta, of the two reference points.

Speedkey access is via **I** for the Indicator menu and selecting **H RoR**.

If you specify delta as zero this indicator will simply calculate the annualised proportional slope of a regression line for the specified period and plot the value on the chart at a time corresponding to the right hand end of the line.

Linear Regression Growth Rate

Linear Regression Growth Rate is the slope of the linear regression line covering a number of periods back from the date at which it is to be measured. This number of periods is the single parameter that this indicator takes. LRGR is expressed in terms of percent per annum compounding. It is accessed from button 20 of *Subchart indicators*.

Speedkey access is via **I** for the Indicator menu and selecting **R LRGR**

Money Flow

Money Flow is an indicator that attempts to approximate average daily turnover by taking the product of the closing price and the volume for each bar and averaging this product over a given period. It is expressed in $ per day irrespective of the compression of the file.

The **Money Flow** indicator is accessed from the floating toolbar by clicking button 14 of *Subchart indicators*. Specify the period required.

Speedkey access is via **I** for the Indicator menu and selecting **I Money Flow**.

Money Flow Index

Steven Archelis has defined Money Flow Index in a way that is some what analogous to the formula for RSI except that this indicator purports to measure whether money is flowing into increasing prices in a stock or into decreasing prices.

The **Money Flow Index** indicator is accessed from the floating toolbar by clicking button 22 of *Subchart indicators*. Specify the period required.

Speedkey access is via **I** for the Indicator menu and selecting **Q Money Flow Index**.

Bull Power and Bear Power

Bull Power and Bear Power are the two components of the Elder-Ray index as developed by Alexander Elder to reveal the power of bulls and bears below the surface of the markets.

Bull Power is the difference between the high and the exponential moving average. Bear Power on the other hand is the difference between the low and the exponential moving average. It is implemented here as two lines on the same indicator subchart, the top one being Bull Power and the bottom one being Bear Power.

The **Elder-Ray Index** is accessed from the floating toolbar by clicking button 15 of *Subchart indicators*. Specify the period required.

Speedkey access is via **I** for the Indicator menu and selecting **J Elder Ray**.

Williams %R

Williams %R is an oscillator described by Larry Williams that is very closely related to the stochastic (100 – Stochastic %K) and it measures the tendency for prices to close each day near the extremities of their recent ranges.

The **Williams %R** is accessed from the floating toolbar by clicking button 16 of *Subchart indicators*. You need to specify the period required.

Speedkey access is via **I** for the Indicator menu and selecting **L Williams %R**.

Bollinger %b

%b is an indicator based on the Bollinger Bands which have been described earlier in this chapter. It measures the proportional extent to which the price has closed between the bottom band and the top band. For example if the price has closed on the bottom band then %b will equal zero. If it closes on the top band then %b will have the value 1. For a close half way between the two bands the value of %b will be 0.5. Because the price can close outside the bands it is possible for this indicator to assume values below zero and above 1.

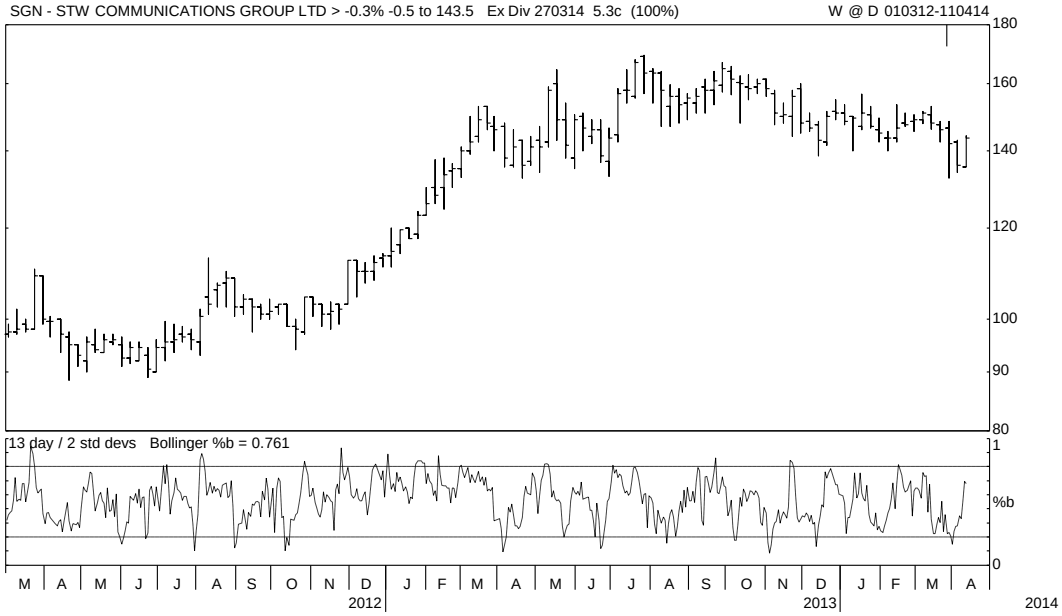

SGN - STW COMMUNICATIONS GROUP LTD > -0.3% -0.5 to 143.5 Ex Div 270314 5.3c (100%)
W @ D 010312-110414
180
160
140
120
100
90
80
13 day / 2 std devs Bollinger %b = 0.761
1
%b
0
M A M J J A S O N D J F M A M J J A S O N D J F M A
2012
2013
2014

Fig3.20

The **%b** indicator is accessed from the floating toolbar by clicking button 17 of *Subchart indicators*. You need to specify the period required as well as the number of standard deviations that the bands should cover.

Speedkey access is via **I** for the Indicator menu and selecting **M %b**.

%BBW (Bollinger Band Width)

%BBW is another indicator based on the Bollinger Bands and it is simply the standard deviation, expressed as a percentage of the moving average value at any point, that is obtained when the Bollinger Band width is calculated. It is the Bollinger band width where the bands are created to be one standard deviation in extent.

%BBW is accessed from the floating toolbar by clicking button 18 of *Subchart indicators*. You only need to specify the period required as the Bollinger bands are assumed to be only one standard deviation wide.

Speedkey access is via **I** for the Indicator menu and selecting **N %BBW**.

Trend

Trend is an analogous calculation to Rate of Return except that it is based on moving averages rather than a line of linear regression except that it is expressed as an annualised compounding growth rate like LRGR. This can be calculated using daily, weekly or monthly compressed files.

Trend attempts to measure how fast the price has been rising. It is expressed both proportionally and annualised – eg 30% pa - so that values obtained from different securities with widely differing share prices may be validly compared.

The **Trend** indicator is accessed from the floating toolbar by clicking button 19 of *Subchart indicators*. You will need to specify the period required for the underlying MA and the separation, delta, of the two reference points.

Speedkey access is via **I** for the Indicator menu and selecting **O Trend**.

SROC Smoothed Rate of Change

Although there are several way to calculate SROC, an oscillator developed by Fred Schutzman, we employ the variation described by Alexander Elder. We first need to understand the concept of Rate of Change. This is simply today's closing price divided by the closing price a given number of periods ago and the result will oscillate around 1. If we wish to smooth it we first take an exponential moving average of the closing prices and then calculate a rate of change on this moving average rather than on the individual prices.

The **SROC** indicator is accessed from the floating toolbar by clicking button 21 of *Subchart indicators*. You will need to specify the period required for the underlying EMA and the separation, delta, of the two reference points.

Speedkey access is via **I** for the Indicator menu and selecting **P SROC**.

Velocity and Behaviour

The global indicators Velocity and Behaviour discussed at the beginning of this chapter can also be plotted as subchart indicators. It is important to understand that in this situation the compression state (days, weeks or months) of the chart will affect these indicators and the Velocity settings set under Format/Define Velocity will refer to the relevant period rather than days. These can be accessed as the final two buttons 23 and 24 of *Subchart Indicators* on the floating toolbar.

Speedkey access is via **I** for the Indicator menu and selecting **S Velocity** or

T Behaviour

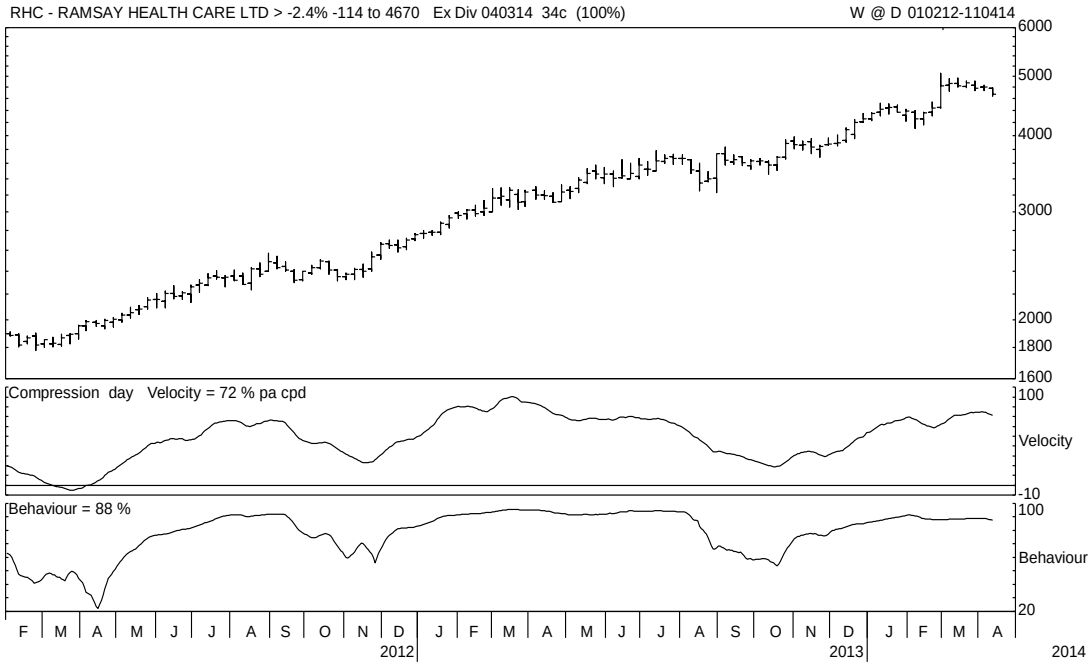


Fig 3.21

Divergences

One important use of indicators is their performance relative to the actual price performance of the security. Certain indicators can generally follow the price movements such that when the price goes to a new high the indicator will also reach a new high. Similarly they will follow the price for new lows. However, this is not always the case and the price may go to new highs but the indicator falls short of making a new high itself. Under these circumstances we say that there has been a divergence between the price action and the indicator action.

The occurrence of divergences can signal an imminent change in trend but this is not always so and so some authors consider that other criteria must also be satisfied simultaneously.

Insight Trader allows the detection of divergences on the indicators of RSI, Stochastic and Slow Stochastic. From the floating toolbar click on **Divergence** - button 1 of *Detection* and this will toggle on the detection of divergence on these indicators. Divergence is highlighted by a line joining the peaks (or troughs) on the indicator chart where this is moving in the opposite direction to that of the price chart. The speedkey for this process is **Ctrl D**.

Note that the detection of divergence is restricted to peaks or troughs which commence in the overbought or oversold regions of these indicators and that should the value of the indicator pass through the 50% line then any test for divergence currently underway will be aborted and reset.

Also note that divergences are identified as they would have been on the day on which they occurred when the new peaks or troughs are made. Subsequent price action may take the peaks or troughs further such that hindsight type identification of divergences on historical data might put divergences in different places.

Stacked indicators

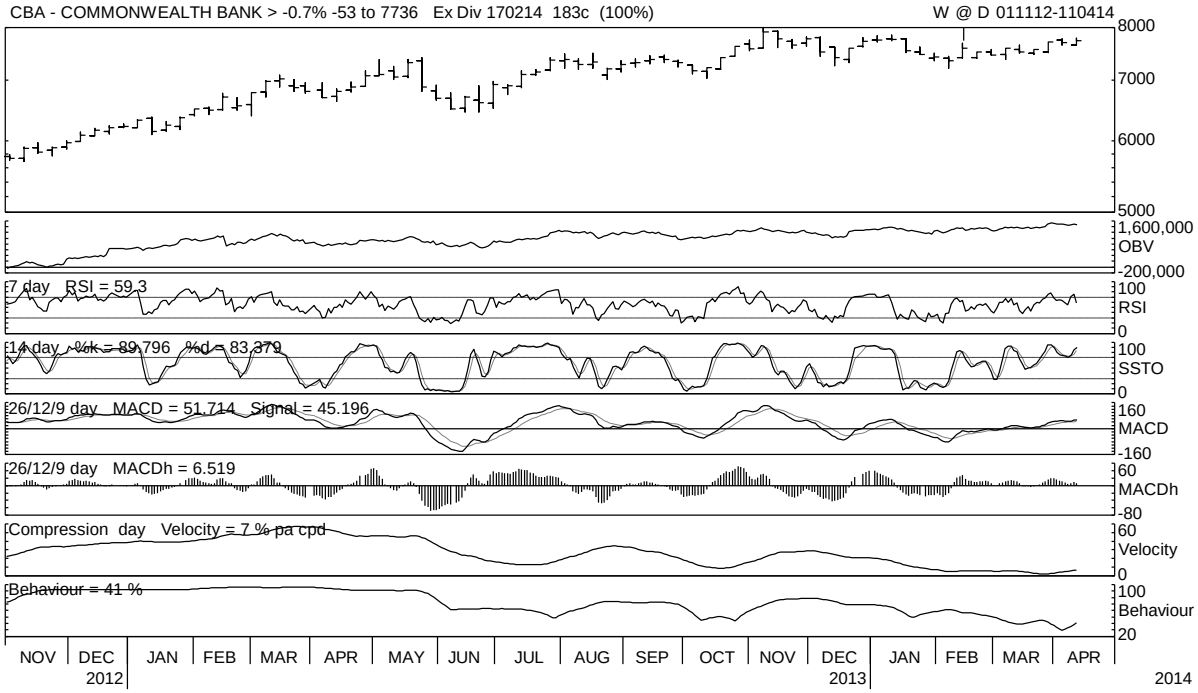


Fig 3.22

Whenever you select an indicator for charting it will add itself underneath any other volume chart or indicators that may already be in the subchart - up to a total of 9 stacked under the main chart.

Removing an indicator from the stack

Any indicator may be removed from the stack simply by placing the cursor in the margin to the right of the vertical scale next to the indicator to be removed and clicking the right mouse button.

Removing all indicators from the stack

To remove all indicators press the speedkey **V** to toggle the subchart off or click button 6 of *Axes* on the floating toolbar. If you now invoke a new indicator it will be the first on a new stack.

Changing the size of the subchart

To quickly change the size of the subchart place the mouse cursor in the margin to the right of the vertical axis at the level where you wish to reposition the top of the subchart and click the left mouse button. Dragging the mouse instead will allow you to alter the subchart continuously.

Chapter 4

Specialised Chart Customisation

This chapter describes a limited number of specialised operations that enable certain effects to be achieved that are not possible otherwise. However, most users will never have to concern themselves with these options and can therefore skip this chapter, at least on a first pass through the manual.

So far we have placed all of our indicators in the lower portion of the window or subchart. However, it is also possible to place these indicators in the main chart and in fact have different indicators in both the subchart and the main chart. Moreover it is possible to chart different elements of your data file eg Open High Low Close Volume separately or even perform calculations on them prior to charting.

Insight Trader has an extremely flexible file structure that allows you to place information in your data files in a great variety of ways. You are not limited to the usual 4, 5 or 6 field HLCV, OHLCV or OHLCVI file structures (O - Open, H - High, L - Low, C - Close, V - Volume, I - Open Interest). You can have between 2 and 20 fields (or locations) in your files in which you can put data of different types.

The first field is always a date field but the other 19 could all be closes from 19 different securities. There is even another data type called an accumulator where daily data is added to the file as an incremental value that gets added to the accumulating total. When charted the cumulative total is plotted but the data when viewed or entered is the incremental value. This data type allows advance/decline type indicators to be easily managed.

In addition to the above, this section will show you how to plot scatter diagrams, to create charts where the horizontal axis is not time and which can even be logarithmically scaled and to perform linear regression analysis.

Chart Specifications

Selecting the option **View/Chart specs** from the menu or using the speedkey **Ctrl+Alt F** will display two rectangles on a dialog box. The first is a list of all the data entities (which are referred to as fields) available in the file together with their corresponding field numbers. The second is the **Define Calculation Required** form on which you can customise the specific information that you want to be displayed on the chart.

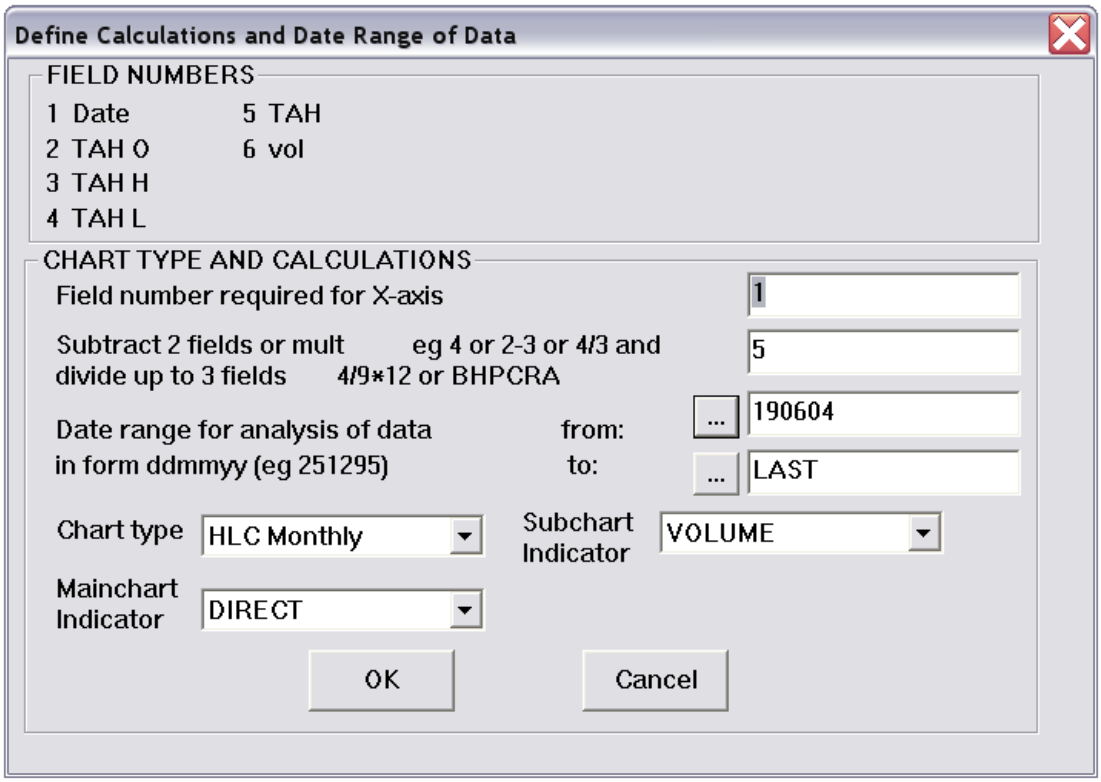


Fig 4.1

X-axis:

The first entry to be completed is the number of the field you wish to plot as the X-values. This will normally be field number 1, the date, but can be any other field number in the file.

Y-axis:

The second entry defines the field, or field combinations, to be plotted as the Y-value and can be:

(i) a single field number

(ii) the difference between two field nos eg. 5-3

(iii) the ratio of two field nos eg. 6/15 also called relative strength)

(iv) the product of two field nos eg. 6*15

(v) a combination of the products and ratios of 3 field nos eg. 2/13/4, 2*13*4 or 2*13/4

(vi) A file name terminated by a backslash eg. BHP\ (rebased chart)

(vii) Two file names separated by a backslash eg. BHP\RIO (Relative strength chart)

(viii) Two file names separated by two backslashes eg. BHP\\RIO. (Rebased relative strength)

Note that option (v) allows you to plot compound indices like the currency corrected ratio of the All Ordinaries to the Dow by dividing the Ords by the Dow and multiplying by the Aussie dollar.

The final three options (eg. BHP\RIO) will ignore the currently loaded data file and take the ratio of the default field of the first file to the default field of the second if present and rebasing if appropriate. The example above will give the relative strength of BHP to RIO by dividing the default field no of file BHP (ie. the close) by the default field of file RIO (ie. also the close). If either file does not exist this specification will not be accepted.

In the Y-axis box:

To obtain a **rebased** plot enter the filename and terminate with a backslash.

To plot the **relative strength** of one security by another where these exist in separate files, enter their filenames separated by a backslash eg. BHP\RIO.

To plot the **rebased relative strength** separate the two filenames with a double backslash eg BHP\\RIO

Date Range:

The date range for plotting ie. the start date and finish date is specified next. This will select all data from the file with dates occurring between, and including, these two extremes. Data outside this range will be excluded. Dates must be entered in the form *ddmmyy*. If zero, or no character at all, is entered for either the start or finish date, this will refer to the FIRST or LAST date in the file, respectively.

This is indicated as such as soon as the user leaves this edit box. If a default starting date has been specified in the **Preferences** form from **Format** in the main menu, then the FIRST date will be taken as this default date rather than the very first date in the file.

NB Setting the date range allows you to select records from a range of dates for plotting. It does not set SCALES on the X-axis, an option which is available on the next form.

Chart Type:

This dropdown list box will show the several different types of charts that are possible. The required type can be selected by clicking the button to the right of the box to display the list and then clicking on the one desired. The chart types which are available from this form are:

(i)	Line or scatter
(ii)	High-low-close bar chart daily
(iii)	High-low-close bar chart weekly
(iv)	High-low-close bar chart monthly
(v)	Point and figure
(vi)	Equivolume daily
(vii)	Equivolume weekly
(viii)	Equivolume monthly
(ix)	Gann swing chart

Candlesticks and equicandles are also available but are accessed directly from the chart using the single keystrokes **C** and **Q**.

The last three options are selectable only if an associated volume field follows the main chart field specified for the Y-axis.

Strictly speaking, chart types (ii) to (viii) are really only applicable for a field which is the close of a high-low-close set. For example, daily HLC bar charts will be plotted from a daily HLC file. Weekly HLC bar charts will be calculated from daily HLC data or plotted directly from a weekly HLC data file. Similarly, monthly HLC charts will be calculated from daily HLC data or plotted directly from a monthly HLC file.

However, (iii), (iv), (v), (vii) and (viii) are still selectable for a simple close field of a data file with more frequent entries (provided that, in the case of equivolume charts, the relevant volume field follows). Weekly and monthly charts will be automatically calculated from daily data files by accumulation of the appropriate daily close information. Similarly, monthly charts can be accumulated from weekly close files.

It should be understood that the calculations performed on a close only file will not be strictly correct since, eg. a weekly HLC bar chart calculated from an isolated daily close field alone, will only show the weekly range for the daily closes. The bars produced will be, in general, somewhat shorter than if the whole day's trading range had been included. Nevertheless, this facility has been made available because it will be of value under appropriate circumstances, provided the limitations of the calculation are borne in mind.

Main Chart Indicator:

Since up to 9 indicators may be stacked under the main price chart the following option should only be used in very specialised circumstances.

Provided the Line or Scatter option has been selected for the chart type above, it is possible to perform one of a number of calculations on the Y field (or field product, ratio, spread etc described above). In addition the following is a list of the indicators which can be plotted in the main chart, together with the number of parameters or time constants required by each, which must have been previously specified (see above) in the Time Constants form. These are displayed in the drop down list box where a single click will select the one required.

Indicator		**No of Parameters**
(I)	Direct	0
(ii)	Momentum	1
(iii)	Moving average oscillator	2
(iv)	Detrend	2
(v)	Relative Strength Index	1
(vi)	Stochastic	1
(vii)	Slow Stochastic	1
(viii)	MACD	3
(ix)	MACD Histogram	3
(x)	+DM/-DM ADX	1
(xi)	ADX/ADXR	1
(xii)	Coppock Indicator	0

Please note that the Coppock is a long term indicator and requires at least two years of data before displaying any information of significance.

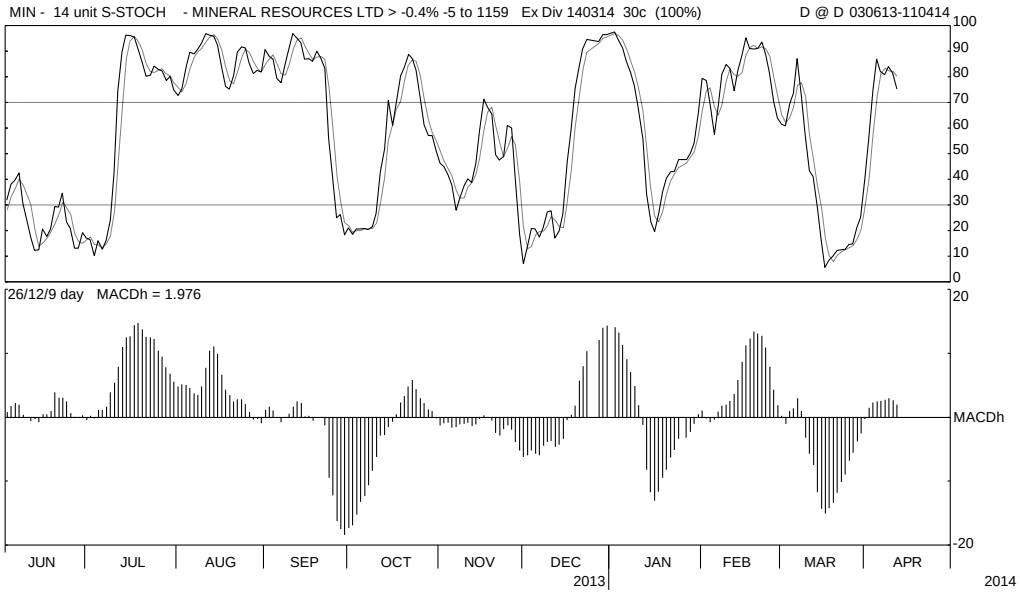


Fig 4.2

Subchart Indicator:

A subchart can be plotted under the main chart and is used for displaying volumes and derived volumes associated with securities on the main chart. It can be used as well for the same indicators as listed for the main chart above. The available indicators are:

(i)	None
(ii)	Volume
(iii)	On balance volume
(iv)	Volume accumulation
(v)	Volume price trend
(vi)	Momentum
(vii)	Detrend
(viii)	Moving average oscillator
(ix)	Relative Strength Index
(x)	Stochastic
(xi)	Slow Stochastic
(xii)	MACD
(xiii)	MACD Histogram
(xiv)	+/-DI ADX
(xv)	ADX/ADXR
(xvi)	Coppock Indicator
(xvii)	Linear Regression Growth Rate
(xviii)	Velocity
(xix)	Behaviour

Options (ii)-(v) are available only for securities on the main chart which have an associated volume field following. Options (vi)-(xix) have time constant requirements as specified in the preceding section.

When this dialog box (also known as the First Form) is complete it is accepted by clicking **OK**.

This will lead into the next dialog box also known as the Second Form, the **Define Chart Specifications** form, which enables you to customise the details of how the chart will be presented.

Define Chart Specifications

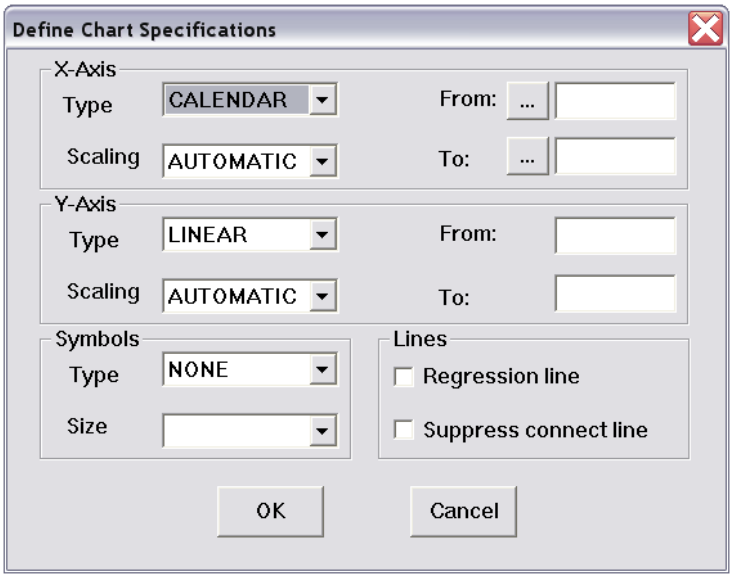


Fig 4.3

X-axis Type:

This drop down list box shows the three options which are available for the X-axis viz. Calendar, Linear and Logarithmic. If field no 1, the date, has been chosen for the X-axis in the previous form then this entry will default to Calendar and cannot be changed.

Scaling:

Two options for scaling are possible viz. Autoscaling and Set Scales. Autoscaling will search the data and automatically adjust the scale to an optimum for the display.

Set scaling will allow you to adjust the scaling to your requirements and is quite independent of the date range chosen for the data in the previous form. The date range for set scaling should be entered in the **From**: and **To**: edit boxes to the right using the format *ddmmyy*. For a sensible chart the date range for scaling should at least span the date range for the data but can exceed it.

When scales are set the program will choose a range which includes the range which you have specified but may exceed it. The actual scale is chosen to sensibly round off the starting and finishing values.

Running Time Window:

A running time window may be set by entering, say, -100 in the **from:-** option and nothing in the **to:-** option. This will fix a time window to show only the last 100 calendar days. Specify -365 to show data back to a year ago.

As data is added to the data file additional days are added on to the display and excess days are dropped off the end. If in addition you place the character **@** plus a positive number in the **to:-** option then blank space to accommodate this number of days will be left at the front of the chart to allow you to project trendlines and cycle grids into the future.

The ranges should be specified in the following form:

From:	ddmmyy	OR	From:	-360
To:	@+100		To:	@+100

Specifying the @ character will allow the computer SYSTEM date (ie today) to be used to set the upper date of the range.

The first example shown above will fix the lower date in the range as specified and the upper date in the range will be set at the system date with 100 days of white space in front for projecting trendlines. The example on the right is a running time window showing almost a year of data with 100 days of white space ahead of the last point plotted.

Y-axis:

The options for scaling on the Y-axis are identical to those for the X-axis except that Calendar axes are not possible.

Symbols:

If the chart type has been specified as Line or Scatter in the previous form then data symbols can be plotted in one of several different shapes viz. none, crosses, plusses, squares, triangles and bars. The drop down list box will display the options from which the desired symbol is selected. The size for the symbols can be similarly selected from zero to 6.

Linear Regression:

A linear regression calculation can be performed on all displayed data points by checking this option. Regression mode can also be toggled on and off directly from the chart using the speedkey **Ctrl G**. Before regression is invoked, if the horizontal axis is not time, it is usual to have selected a symbol of a certain size, and the **Suppress Line** option below should be checked also to prevent the individual points being joined by straight line segments. This will also hide bars and candles which can also be toggled on and off directly from the chart using the speedkey **Ctrl H**. The speedkey **Ctrl Z,** which removes moving average type indicators, ratio and rebased mode also removes regression.

Fig 4.4

When a linear regression line is plotted on a logarithmic chart the slope of the line is also displayed viz:

- G/rate = - the growth rate of the regression line in percent per annum compounding

Accept the Form

To accept this form click OK and the chart so specified will be plotted.

Chapter 5

Advanced Productivity Techniques

Overview

Insight Trader has been designed to allow you to process, organise and analyse very large amounts of information in a very short time. Because of the sheer quantity of information that needs to be assessed, you must have this process streamlined to enable you to utilise your time most effectively.

Firstly, Insight Trader can store the whole of the ASX in a single directory and this means that you are not forced to switch between many directories to find the various securities that you need. Secondly, the format used to store the data on disk is very efficient in terms of disk space required and also loads and saves extremely quickly.

Thirdly, the program has an internal database containing information on every company on the ASX including its code, full name and the industry GICS subsector to which it belongs. This allows you to group, organise and manipulate whole industry sectors with a few keystrokes. Finally, Insight Trader uses speedkeys extensively. This allows you to bypass so much of the form filling in that bedevils and slows down the operation of many Windows based programs.

In this environment we have developed several tools to maximise your productivity. These are the slideshows, the generation of reference (or highlight lists) and the Today file. In addition, the automatic box size facility for point and figure charts was developed to enable you to run slideshows of point and figure charts without having to individually choose box sizes for each security trading at different price levels.

Slideshows

With experience you will soon develop an ability to make a rapid assessment of a chart, perhaps within a matter of a few seconds. Slideshows enable you to view charts rapidly, one after the other, without you needing to press keys or to activate the computer in any way.

After setting the slideshow in motion you can sit back and watch one chart after another being presented to you for your perusal. They are separated from one another by a user customisable time delay. In this way it is possible to view and assess a chart of every company on the ASX in a period of about one hour.

The Saved Chart Slideshow

We dealt with saved charts and their uses in previous chapters and saw how it is possible to save up to a total of 100 000 arrangements of charts (each containing up to 506 individual charts) in ten separate categories. After switching to the chart category of interest you can click button 4 on the main toolbar, enter the delay required between frames, and watch each of the 10 000 saved chart arrangements in this category be thrown up on to the screen for your inspection.

At any time you can freeze the display by pressing the **ESC** key and then clicking **Yes** to abort the slide show. After this you can even go in and manipulate the chart by zooming or editing it by adding notes or trendlines etc and perhaps even resaving it. You can then continue the slide show by pressing the F9 key. The various saved chart arrangements you are viewing might very well be quite different from one another and consist of different numbers of charts and types of charts on each screen.

This type of slideshow requires that each of the (up to 10 000) saved chart arrangements will have had to have been constructed by you and saved to disk beforehand – a process that involves significant effort, normally over an extended period of time.

However, a slideshow of saved charts is valuable because of the variety of chart formats that can appear consecutively, you can have several different securities on a screen at the one time and you can have constructions such as trendlines and indicators individually customised for each chart. You would use this slideshow frequently to view the charts and securities of special interest to you such as various views of your portfolio stocks or securities and indices on a watch list.

You can click button 4 on the main toolbar, or press the speedkey **F9**, to commence the slideshow immediately using the default time separation between charts and starting from the first saved chart in the category. If you wish instead to customise the settings before you start then click **Runslides** from the main menu and select the item **Delay**. Enter an appropriate number of seconds between 1 and 20 as the separation required and click **OK**.

Should you wish to start at a saved arrangement other than the first arrangement in the category you should enter its position number in the list into **Start at** in the **Runslides** dropdown menu. Then click the final item in the **Runslides** menu - **Commence** - to start the show.

To find the position number of any chart arrangement in its list retrieve the list of saved charts by pressing **Alt R**. Then highlight the required saved chart title by clicking on it once. The number (eg for 25) will be shown as **Saved chart 25/520** on the dialog box.

Running the Saved Chart Slideshow Manually

If instead you wish to manually progress the slide show just press the + or – keys to move forwards or backwards through the saved charts. The same effect can be obtained by putting **Scroll Lock** on and then rolling the mousewheel to move through the saved chart arrangements.

Although this is conveniently done on a desktop numeric keyboard if you are instead using a laptop you need to press the Shift key as well as the + key. Accordingly the Space Bar has been enabled to perform the same function as the + key when moving forward through saved charts. Use the - key to go backwards as before.

Note that double clicking the mousewheel button toggles between two different states. The default is that rolling the mousewheel will cause the data within a single chart to scroll. Double clicking the mousewheel button will put the system into the other state where any mousewheel rolling will cause the focus to move between the different charts on screen and it is therefore equivalent to pressing the left and right arrow keys.

The Chart Arrangement Slideshow

Another manually operated form of slideshow is to place all charts, up to a maximum of 506 on a single screen as a chart arrangement. By maximising one of these charts with the **UpArrow** key you can manually page through the rest in sequence by pressing the **LeftArrow** or the **RightArrow** keys. You can also move through the charts (by first double clicking the mousewheel button to toggle into a suitable mode) and then rolling the mousewheel.

A chart arrangement for this purpose can be created manually one window at a time or by generating them automatically using the technique **Generate a chart arrangement from a reference list** described later in this chapter.

The Chart Arrangement slideshow must necessarily be progressed manually and is limited to a maximum of 506 component charts per arrangement - unlike the automatic option that is available in the Saved Chart slideshow and the Autorun slideshow to be discussed next. Nevertheless it is extremely convenient and extensively utilised.

The Autorun Slideshow

The saved chart slideshow is of course limited to whatever securities and chart formats you have saved individually yourself – unless you have generated them via the automatic option. They will normally be limited in number and though it would be possible to view every security on the ASX in this way there is fortunately a much more convenient way of achieving this. Generally the saved chart slideshow is also not suitable for viewing securities in a list that may be changing radically and unexpectedly from day to day.

The autorun slideshow provides an answer to this restriction by running the slideshow using a fixed chart arrangement format for each security in a list of security codes. It is usual to retrieve a saved chart arrangement setup with the format you require and then to specify a reference list of securities, each of which you wish to see presented in this format. A chart arrangement in this format is then presented to you for each security in the list in turn. These lists can be constructed quickly, easily and automatically and you can have as many of them as you wish.

Creating the Reference List

The structure of a reference list is very simple and such a list is therefore easy to construct manually or automatically as will be described later. Create an ASCII file with a text editor or wordprocessor with your list of security codes (in any order) in the following form. The first line should be set out as a date and a descriptive title enclosed in quotes and separated by a comma:

“19-3-14”,”My Portfolio List”
ANZ
BHP
RIO
GEM
…. Etc

When your list is complete then save the file under a name like “PORTFLIO.LST” into the WORKING\LST directory off the main directory that contains your ASX data. Mostly this will be \WINIT . The name must have the extension LST but the rest of the name is up to you.

For foreign data format databases such as BodhiOne, Metastock or QuotesPlus databases this will be the WINITSYS\WORKING\LST off the main stem directory.

If you are using Notepad, Wordpad or Microsoft Word under very early versions of Windows to create the reference list then you must, when saving for the first time, specify that it is a **Text** file. Furthermore you must enclose the filename in quotes to prevent it being saved with an additional unwanted TXT extension eg PORTFLIO.LST.TXT because Insight Trader will not recognise it as a valid .LST file.

Commencing the Autorun Slideshow

To run this as a slideshow you first need to create a chart arrangement in the format that you wish to view all the securities on the list. It does not matter which security you choose to construct this template with as the original security will be replaced in turn by each of the codes on your reference list. Use only one security code per arrangement but it can be used in combination with another security code so long as the other code is part of a relative strength plot.

When the slideshow is run the code that is used in the denominator of any relative strength plot will remain fixed and the substitution from your list will occur in the numerator code only. Any point and figure charts in the template should be set up with an auto box size.

It is most common to retrieve a suitable saved chart arrangement that can be used as a template for the autorun. If you have created an arrangement specially for this purpose you may want to save it to disk as a saved chart arrangement so that you can retrieve it again to reuse regularly in the future.

Load the chart template of your choice, choose **View** from the main menu and select the item **Autorun Highlights**. A dialog box will appear asking you for the name of the **Reference list file** which **must** be located in the WORKING\LST directory. Enter in the edit box the name of the file you have just saved (without the extension) or browse to it using the button with the three periods:

PORTFLIO

and click **OK**

Another dialog box will appear requesting you to input the delay or time separation between consecutive screens. Enter a number between 1 and 20 and press **OK**. You will also need to answer whether you wish the slideshow to commence at the first code in the reference list or to resume a previously interrupted autorun. Then the slideshow will commence.

Halting the Slideshow

To temporarily halt the slideshow to give more time for careful perusal of charts of special interest just press the **ESC** key. The chart can then be viewed at leisure, manipulated and even saved to disk before the slideshow is recommenced by pressing **Ctrl F9**. Should you wish to terminate the slideshow at any time just press **ESC** without later pressing **Ctrl F9**.

While the slideshow is underway, if you should wish to return to the previous security in the list pressing PgUp will cause the slideshow to go back one frame. This can be repeated several times to go back several frames.

It is possible to resume an interrupted autorun even after you have switched your computer off by selecting **Resume run** rather than **First code** when you are restarting the autorun using the same reference list.

Running the Slideshow Manually

If you wish to progress through the slideshow manually set the time delay between frames at zero. Pressing **PgUp/PgDn** or rolling the mousewheel will then allow you to step manually forwards or backwards through the list of securities leaving you unlimited time to view each chart. Alternatively you may press the spacebar to advance to the next chart.

You can perform operations on the charts, including editing and saving, during a manual autorun.

Creating Reference or Highlight Lists

The reference lists required for an autorun are critical to the process and can be generated manually or can be generated by the program in several different ways. The generation and management of these reference lists (sometimes referred to as highlight lists) is the subject of this section. They can also be used for generating chart arrangements as well as system scans.

Manually Generated Reference Lists

The creation of manually generated reference lists has been described in the section above.

The Highlighter List

Whenever the Datacapture utility is run to distribute daily information from an ASCII file, downloaded via the internet from a data service or input manually using the BULK utility, it is possible to set a filter, known as the Highlighter, which will automatically flag exceptionally performing securities and place them on a reference scratch list called HILITE.LST. There are up to three criteria used for the selection process based on momentum, volume and price. The setting of these criteria is discussed in Chapter 8.

In addition to the highlighted securities any securities that have hit their alarm levels are also placed on this list.

After you have downloaded the day's data you will be able to immediately access this highlight list and autorun it against a template in exactly the same way as for a manually generated list explained above. So you can at once view charts of all the high performers of the day with a few simple keystrokes.

If you wish to save this list before it is overwritten then choose **File/Archive Hilite list** and give it a unique file name. Names like HL141225 constructed from a back to front date are very convenient as they are listed alphanumerically in date order when you are browsing the directory.

Generate Reference List from on screen Chart Arrangement

It is possible to create a reference list of the securities from the arrangement of the charts on screen. This will be useful if each chart displays a different security but if any securities are identical they will also be duplicated in the list. This function is accessed from **File/Generate Ref List from chart arrgmnt.**

Generate Reference List from a Portfolio

You can create a reference file of your portfolio stocks that can be used like any other reference list. From the main **Portfolio** menu choose **File/Create reference file** and a list file will be generated containing the codes for all the securities in your portfolio (See Chapter 10)

Generate list of all securities with alarms set

Whenever the **Check Data Integrity** option is run from the **Utilities** menu a file **ALARMSET.LST** will be produced that contains all the stocks that have alarms set and lists these together with their current activating price if alarms have been hit. This file is accessed like any LST file by clicking the lightbulb button on the main toolbar and loading this file which is is available as a standard LST file like HILITE from the dropdown list box from the Enter Highlight File Name dialog box. (See Chapter 7)

Generate list of all securities with alarms hit

Whenever the Systems tester is run a file **SYSALARMS.LST** will be produced that contains all the stocks from the Reference List used that have had their alarms hit on the target date. (See Chapter 9)

Generate Reference List from ASX GICS Subsectors

The internal ASX database works intimately with the program by allowing you to create lists of all the security codes in any given standard ASX GICS subsectors such as the Gold subindustry, or the whole Materials Economic Sector, Consumer Finance or the whole Financials sector. Or all the Energy or all the Health Care. Or any combination of these. Or every company on the board for that matter.

From the **File** menu press **Generate Ref list from Sectors** and you will get a list displayed of all the standard ASX GICS sectors and their code numbers. Select a sector, range of sectors, or a number of individual sectors and click **Accept Selection**. If you want the lot just press the **Select all** button.

To select several items hold the **Ctrl** key down and click on each of those you wish to select. For consecutive items click on the first item and then while holding the shift key down click on the last item in the range or press the arrow key down until the range is selected.

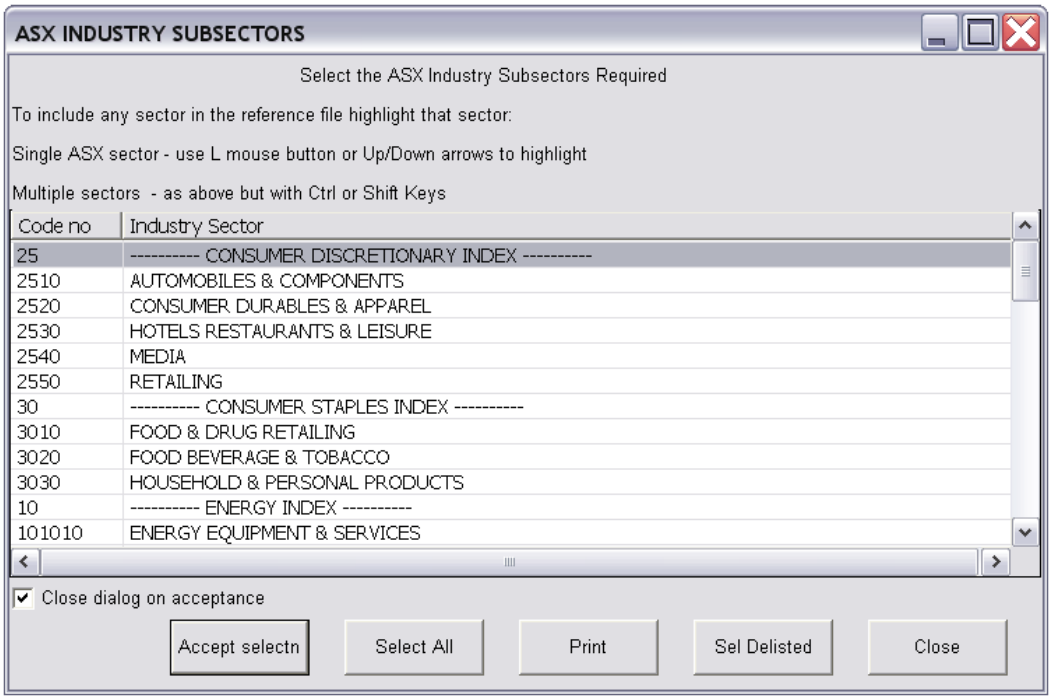

ASX INDUSTRY SUBSECTORS
Select the ASX Industry Subsectors Required
To include any sector in the reference file highlight that sector:
Single ASX sector - use L mouse button or Up/Down arrows to highlight
Multiple sectors - as above but with Ctrl or Shift Keys
Code no
Industry Sector
25 ---------- CONSUMER DISCRETIONARY INDEX ----------
2510 AUTOMOBILES & COMPONENTS
2520 CONSUMER DURABLES & APPAREL
2530 HOTELS RESTAURANTS & LEISURE
2540 MEDIA
2550 RETAILING
30 ---------- CONSUMER STAPLES INDEX ----------
3010 FOOD & DRUG RETAILING
3020 FOOD BEVERAGE & TOBACCO
3030 HOUSEHOLD & PERSONAL PRODUCTS
10 ---------- ENERGY INDEX ----------
101010 ENERGY EQUIPMENT & SERVICES
Close dialog on acceptance
Accept selectn
Select All
Print
Sel Delisted
Close

Fig 5.1

The default file to write to is the scratch file **SELECTED**. If you choose this default then it will overwrite the previous SELECTED list. If you choose another name like "GOLDS" then it will generate a file GOLDS.LST in the current IT directory that you are logged into and will not be overwritten unless you do so intentionally at a later date. This file can then be used repeatedly in the future.

When you have done this you will have generated a reference list file which you can then Autorun in the same way as described above. So you can set it up to run a slideshow of, say, all the Gold companies, all the Banks or even every stock on the board.

(This reference list file can also be used to select an ASX GICS sector or sectors to filter with the Systems Tester. You then specify your reference file for filtering to be this file you have just generated.)

To create a list of indices for all of the industry subsectors click on the column header *Industry Sector* and the list will be sorted according to this column. All indices will be at the bottom or the top of the list making it easy to select them as a range and to create a reference file say SUBSECTOR INDICES.

As time goes on, the internal database supplied with every copy of Insight Trader will get out of date as names change, companies change their subsectors, new listings appear and companies are delisted or relisted. However, you can keep this information up to date if you subscribe to the Insight Trader Database Manager Service described in Chapter 8. Industry subsector reference lists created as described above should be regenerated at regular intervals to keep them current.

Systems Filter Highlight List

When the Systems Tester described in Chapter 9 is run in Filter mode you must specify a reference list of the securities to include in the search (which of course can in fact be the whole of the market) and it will produce a highlight list (in the scratch file called HILITE) of all those securities that have satisfied the conditions that you have specified. The filter list produced in this way can be autorun as the reference list in the same way as any of the other reference lists mentioned above.

You can even specify the scratch file HILITE as a reference file for filtering. If you do this you can run a number of systems consecutively on HILITE and it will gradually reduce the number of securities in the file to a list of all those that satisfy the criteria of all the systems tested.

Tag List

During an autorun, as the various charts are flashing by, you will from time to time see one that you wish to keep a note of. However, because the speed at which the process is proceeding there is not time to write and watch simultaneously. To solve this problem we created the **Tag file** which is just another secondary highlight list that you create yourself as you are viewing a primary autorun slideshow.

During the autorun, by pressing either the **Insert** key or **DownArrow** key, you can add the codes of any currently displayed securities to the Tag file reference list without interrupting the rolling display. This temporary file is given the name **TAG** and can be used just like any other reference file including autorunning it in its own right:

For example you may wish to do an autorun of all the gold stocks from a reference list generated from the **File** menu under the option **Generate Ref List from Sectors** as explained above. During the autorun you may see several securities that you would like to investigate further. If you press **INS** or **DownArrow** while any of these securities are still displayed then that security name will be added to the TAG list.

After the first autorun is finished you can then autorun the TAG file which contains only those securities that you are particularly interested in. In effect you have created your own shortlist.

The TAG file will keep adding security names to its list until you specifically reinitialise it to start again. To do this choose **Init/Save Tag file** from **View** on the main menu which gives you the option to save the current file TAG under a different name before you start the TAG file off again from scratch.

If you do not wish to save the existing TAG file just leave the name blank when requested for the name to save under. You do not need to specify the drive or directory if you do not wish to as it will choose the currently logged IT data drive and directory as the default. If you do not give an extension to the filename it is assumed to be "LST".

To create a short shortlist from your current TAG file save it under another name and then autorun this renamed file tagging any securities that you consider are really exceptional. This process can be continued indefinitely.

The Watch List

Another file called **WATCH.LST** is available for adding security codes to whenever you see a chart that you would like to keep tabs on. Simply hold the **Ctrl** key down and click the **left mouse button** on the chart proper. This will automatically add that code in the window on to the WATCH list if it is not already there. To remove a code from the WATCH list if it is there click the **left mouse button** with the **Shift** key held down. To remove all previous securities from the WATCH list and add a new code to a newly initialised WATCH list hold both **Ctrl and Shft** keys down while **left click**ing on the chart of the security to add.

Accessing Reference List files

Whenever you need to access a reference list file for autorunning, system filtering, charting etc you will be presented with a dialog box requesting the name of the file. A drop down list box will offer you the choice of the eight standard scratch files – **HILITE**, **TAG**, **WATCH, ALARMSET**, **SELECTED, ASX100DB, ASX200DB, ASX500DB, ASXSmallOrdsdb, ASXSubIndicesdb, ASXSectorIndicesdb**. Alternatively you can **Browse** for the file, type it in, or hit the **Generate** button if you wish to generate a list from the ASX GICS industry sectors.

The last three files are only available for Database Manager subscribers where they are automatically updated each week.

Viewing Reference Lists

You can view a reference list from **File/Highlight list**, or by pressing the speedkey **Alt J** or by clicking the **light bulb** on the main toolbar. Enter the highlight or reference list file name in the box provided and a dialog box will appear listing each security code, name, main activity, and if it has been generated from system filtering - criteria met, 10 day momentum, percentage by which the volume is above the 10 day moving average of the volume, percentage by which the price is above the 10 day moving average of the price.

Double clicking any security on the list will chart it. Selecting any security, range of securities or several individual securities and pressing the **Chart** button will create a chart of each one selected.

Immediately pressing the ENTER key or clicking the **Chart all** button will throw up a chart of every security on the list on the screen at the same time.

You can resort the list on any column by clicking the column header before printing it or pressing the **Resave** list button to resave it to disk.

Attempting to resave a Filter report displaying in a Highlighter dialog will immediately take you to the Filter report dialog to allow you to sort and resave from there to maintain the integrity of the filter list.

A button "Get data" has been added on the List Highlights dialog to allow you to retrieve fundamental and other data for the list of securities currently displayed.

The **Close dialog on acceptance** check box should be unticked if you do not wish it to close after charting any selection. Otherwise it will be closed.

Generate a Chart Arrangement from a Reference List

You can very simply and quickly create a tiled arrangement of charts from any reference list.

From the main menu choose **View/Generate chart arrangement** (or press **Ctrl+Shft+A**) and enter the name of the reference list to chart. If you don't have a sample chart on screen the program will create one for you in the form that all charts will be presented. (If this is not in a suitable format press **Cancel** and customise the chart before choosing **View/Generate chart arrangement** again.)

Click **OK** and charts of all the codes on the reference list will be tiled on the screen up to a maximum of 506. You can abort the process at any time by pressing the **ESC** key.

If there is a regression line on the template chart being used the charts resulting from the generation you will be asked if you wish to automatically arrange these in order of decreasing slope of the regression line. This aids in sector analysis allowing the charts of the strongest sectors (or the strongest stocks) to be automatically placed in the upper left hand corner of the main program window decreasing in turn to the weakest in the lower right.

Viewing a Large Number of Tiled Charts on Screen

If you have a very large number of charts on screen simultaneously they become too small to view usefully in their tiled arrangement. Under these circumstances you can maximise one by pressing the **Up Arrow** key and consecutively maximise each of the others in sequence by pressing the **Left** and **Right Arrow** key. This can be considered as another form of manually operated slide show that is extremely convenient and quick and easy to operate. If you first toggle into a suitable state by double clicking the mousewheel you can then move through these charts in an identical way by rolling the mousewheel.

When paging through the windows of a chart arrangement in this manner, as the final chart is accessed there will be a beep indicating that you have reached the end ot the list. Otherwise is is possible to continue cycling through all the charts again without realising. This beep can be suppressed from the **Format** submenu by unchecking the item **Alarm status**.

Generate Saved Charts from Autoruns

This facility bridges the gap between the Autorun and Saved Chart Arrangement slideshows by allowing you to generate saved charts automatically during any autorun.

To do this, display a chart arrangement of the desired format by plotting it directly or selecting a suitable replay chart as described above. Then choose **Generate replays** from the **View** Menu. A dialog box will appear to enable you to compose the title of the saved charts. You are given the opportunity to place a text string before the code - **Pre text**, a text string after the code - **Post text**, and the **Title** or company name.

For example you might choose "Gold" as the pre text, "Daily candlestick" as the post text and you might choose to include the company name. All replay charts subsequently generated during the next Autorun will be given titles like:

Gold NCM Newcrest Mining Daily candlesticks

Gold NST Northern Star Resources LTD Daily candlesticks

Then select **Autorun** from the **View** menu and you will be warned before the autorun starts that all charts displayed in the next autorun will be automatically saved as replay charts in the current saved chart category. Use this facility sparingly as it is easy to quickly generate many saved chart arrangements so as to fill an entire category with the maximum 10 000 saved charts per category that are available.

Creating and Retrieving a Favourite Template

There is a special saved chart arrangement in each category, which is the very first one on the list, and you can pull this arrangement up at any time by using the speedkey **Alt Q**. This is particularly useful if you frequently wish to see your charts in a particular format arrangement.

Simply create a saved chart arrangement in your favourite layout with time ranges, chart types, and indicators that you require and save it into the current category. To ensure that it goes into first position and stays there just save it with a title commencing with a few spaces. Whenever you wish to retrieve the template just press **Alt Q** and your layout will immediately appear on screen. **Ctrl N** will then allow you to substitute any other security code in all windows of your template.

Today File

Normally you can only view data in your charts at the end of the day after the market has closed and you have downloaded from your data service or input the figures from the day's trading into your files manually.

However, Insight Trader has the facility to show intraday data such that you can watch today's bar or candlestick etc forming before your eyes. The colour of today's bar is distinguished from the rest of the chart by a different colour. This colour is chosen to be that of the cursor. The file, known as the **Today file** is given the name **IDddmmyy.TDY** and has the form as follows:

"19-3-14", "Intraday data"
ANZ, 603, 620, 601, 615, 150, "Up 10c to 615"
BHP, 1865, 1880, 1860, 1875, 3270, "Up 45c to 1875"

…. Etc

The first line is any two quoted strings separated by commas

The other lines in the file have the format:

code, open, high, low, close, volume, "comment"

If a file of this structure is put into the main IT directory containing your ASX data AND that file is named by today's date eg ID190305.TDY if today is 190305 then if you call up a file such as BHP, any data for that security that exists in the Today file will be appended to the chart that is drawn. Moreover the title of the chart will have appended to its beginning the comment, at the end of each line in the Today file, which can if you wish be empty. You would therefore see as the title of the chart:

Up 45c to 1875:- BHP Billiton LTD

You can use the today file not only to supply the intraday data to the chart but it can also simultaneously be used as a reference file for an autorun.

Constructing the Today File

Just as for any list file, the Today file can be constructed manually from information that you receive during the day using a text editor or wordprocessor and saving the file as an ASCII or text file. Alternatively you may be getting intraday data via the internet or perhaps snapshots from your broker or a data service at various times during the day. Should you wish to have these downloads automatically processed into the correct Today file format then we may be able to provide a service to assist you by writing a conversion utility. Alternatively you could arrange for your data provider to output the information in the correct format for you.

The CommSec Today File

You can download a Watchlist file from the CommSec Ltd website that contains intraday information for the stocks in several of your watchlists giving Open, High Low, Last and volume – as well as Bid and Ask - up to the time that the file was constructed. Each watchlist file can contain only a limed number of codes (~30). However, you can create several of these watchlists and combine them in a "group" that can be downloaded as a single file.

This file can be converted into a valid Insight Trader Today file by selecting from the main menu **Utilties/Convert Commsec Today file** or clicking button 26 on the main toolbar. This process will automatically combine the information in all these files to create an intraday snapshot.

Accessing a chart of any security within that list will now have appended to its history this very latest information. The process can be carried out as many times during the day as you like to allow you to update your charts to monitor their progress intraday.

From the Commsec website you can also download the "End of day" file in Insight Trader format that allows you to update data for the whole exchange that will be valid up until the time that you downloaded. Please contact us if you wish to receive detailed instructions for streamlining this process.

The ASX Today File

Provision for downloading a snapshot file, similar to that provided for the TODAY file from Commsec, has been enabled for those users who are not Commsec clients. For this we use facilities on the ASX website.

You will need to construct a number of watch lists on the ASX site and having done this then you can download these lists at any time during the day into your WINIT directory and click the menu item **Utilities/Convert ASX Today file**. This will provide charts with the final bar, candle etc for today as it has formed so far for all those securities on your watch lists. Using this method you can keep track of your charts during the day.

At the time of writing the prices supplied in these ASX watchlists are 20 minutes delayed.

Kill all Today Files

An option 'Kill all Today Files' is available under the Utilities menu to remove the intraday files created from downloading the relevant files from the Commsec or ASX sites during trading

.

Chapter 6

Configuration

Overview

Different users like to customise certain program settings according to their aesthetic preferences and to facilitate their specific patterns of work behaviour. Insight Trader makes it possible to customise the colours of the background, lines and fonts and to change printer line thickness. You can also change font types and sizes for both the screen font and the printer font as well as the various ways in which certain options such as grids and scaling will be presented.

Graphics Colours

Perhaps the most personal aspect that you will want to configure is the colour scheme for your charts. Choose **Format** from the main menu and select the **Graphics colours** item. A window will appear showing a reduced representation of a chart with the objects on it that require to be assigned colours.

There are 20 buttons representing each of the various objects and a number from 0-15, the current colour number for that object, appears on each of these buttons. By pressing any button for a particular object the colour and number for that object will change by one. There are two more buttons under the top 20 - one controlling the **Direction** in which the colour number will change and the other providing one of 9 preset **Standard configurations**.

If the direction of the arrow is to the right the colour number of any button will increase if pressed, if to the left it will decrease. The direction of the arrow can be toggled left and right by pressing the direction button.

Note that any one of the 9 standard colour schemes can be used as it stands or as a starting point to modify to suit your own taste. Once you accept a new colour scheme, either a standard one or one that you have customised, it will overwrite colour scheme number 0 which is the current scheme in use. If you customise one and save it but change it to another at a later date the first one will be lost. However, the standard colour schemes will always be available.

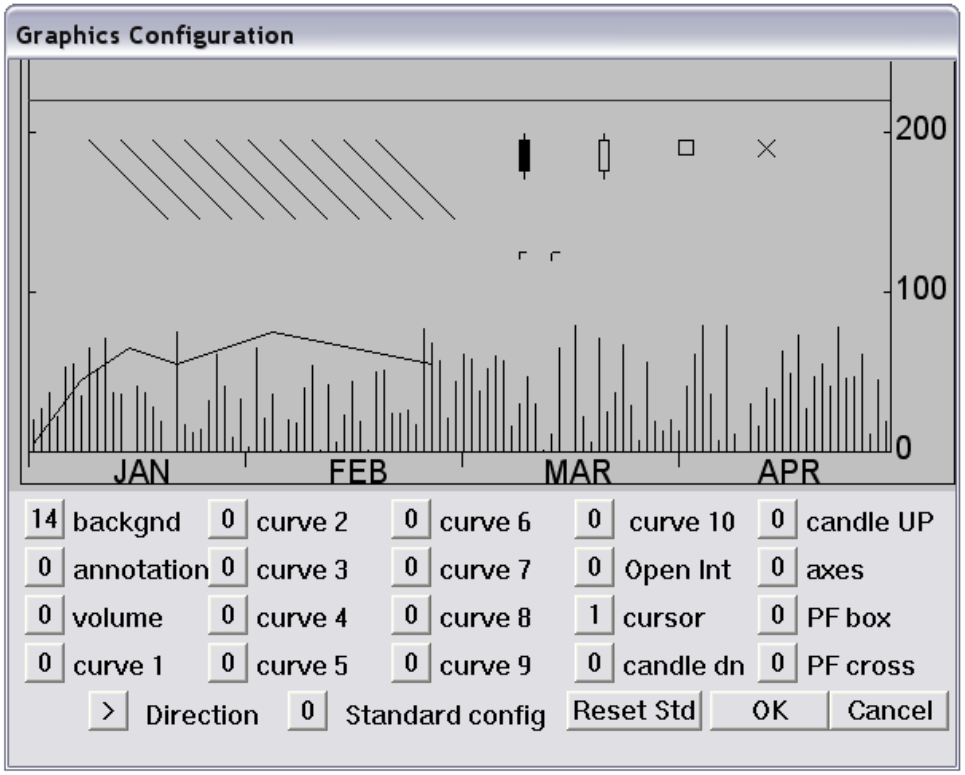


Fig 6.1

Adjust the colours to suit your taste, click OK and press OK to save the configuration. Note that any charts on screen will be cleared whenever you save a new configuration to disk.

If you wish to permanently alter any of the standard configurations, then after you have customised it to a format that you might want to use frequently just press the button **Reset Std**. You will then be able to quickly change your colour settings to any of your own 9 customised standard configurations.

Screen Font

Choose **Format/Screen font** from the main menu

The fonts that you choose can be of several types - fixed or proportional, scalable or nonscaleable. A fixed font such as **Courier New** has a constant spacing between the characters. A proportional font such as **Arial** on the other hand varies the separation such that each character occupies more or less space depending on whether they are fat like a W or thin like an I.

However, both of these fonts get compressed or extended when the chart window is reduced or increased in size and as such they are both referred to as scalable. Nonscaleable fonts are like **Fixedsys** or **System** (fixed and proportional fonts respectively) do not compress when the chart is reduced

We recommend Arial of size 12 as a good screen font that is both proportional and scalable. When you have selected both the size and type of your font click OK to accept and the font will be used for the current session. If you want to save the new font as your permanent default choose **Format/Save configuration** and click **Yes.**

Printer Font

Choose **Format/Printer font** from the main menu

The choice for the printer font is similar to that for the screen font but can only be determined by trial and error ie by printing charts to your printer using the various sizes and types of font which are available.

We recommend Arial of size 24 as a good printer font. You accept and select the printer font and save the configuration as for the screen font above. You can if you wish use an entirely different font for your printer to that which you use on screen.

Configure Preferences

Choosing this item from the **Format** menu or pressing **Alt O** brings up the following dialog box. You may need to enter the various options here.

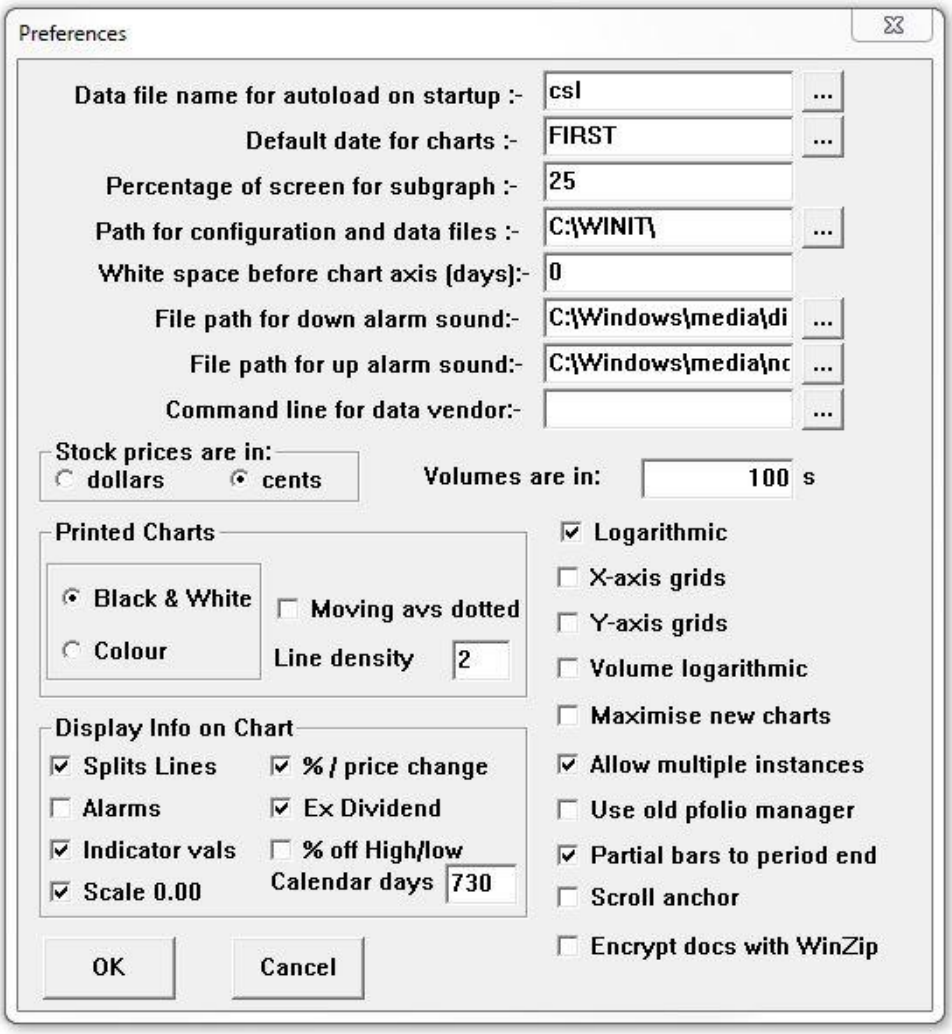


Fig 6.2

Browse Buttons

You will notice that there are small buttons to the right of several of the input boxes that have ellipses (…) on them. These buttons allow you to browse for a date, a folder or a file instead of typing in the information by hand.

Data file name for auto load on start up

When Insight Trader first starts it loads into memory what is known as the default security file which is specified in the first edit box.

Enter into the box the filename of the security that you would like to see whenever you first enter your program. It may for many people be the file for the All Ordinaries Index.

Default Starting Date for Charts

This item allows you to set the date you would want all your charts to commence from if you do not specify a date when you create your charts. If you leave it blank it will default to the first date in each file. However, you may wish to set it at the beginning of a particular year say 010114 if you are mainly interested in more recent activity.

Percentage of Screen for Subgraph

The default initial subchart size can be set by entering an appropriate number in this box between 10 and 50. This can be varied during any session as described in Chapter 3 under **Stacked Indicators**.

Path for Configuration and Data Files

This path will be the stem directory off which reside the alphabetic (or DATA) subdirectories containing the data files that you wish to analyse. It will normally be \WINIT\ but ensure that you do not append a subdirectory DATA to this specification. You can have any number of Insight Trader directories containing data of various sorts but most people will have just one.

The easiest way to create a new IT directory is to change this path to whatever name you would like for this directory and click OK. It will recognise the directory as not yet valid and ask you whether you wish to create it. If you do the directory will be created and the necessary files required by the program will be placed into it to enable it to operate as a normal IT directory. Note that when you log on to an existing older IT directory, WinIT may not recognise it as valid yet because there might be extra files it will need to insert to make it operational. Anyway click **Yes** to establish as a new directory.

Changing to an Established IT Directory

If you have already established one or more directories in this way they are then logged as your working directories in a list which can be accessed by clicking toolbar button 11 or with the speedkey **Alt D**. To rapidly change from your current directory to one listed in the box that appears just double click it and the change will be immediate. However, all existing displayed charts in your working area will be removed.

If you wish to remove an established directory from the list just highlight it and press the **Delete** button. Note that it will only be removed from the list. The directory itself will remain intact on your hard drive.

Managing all User generated files in the WORKING Folder

The directory structure allows simple access, transfer and backing up of most of the current operating files that are configured or changed by the system or user. All portfolio .PFL and .PFO files are contained in a subfolder PFL, all files relating to saved charts are stored in the CHARTS subfolder, all files relating to systems are in a subfolder SYSTEMS, all .EMF files are in a subfolder EMF, all general configuration files are in the CFG subfolder, all reference and hilite .LST files are in the LST subfolder, all documents are in the DOCUMENTS subfolder, all CSV files for User Supplied Extended Fundamental information are in the CSVfiles subfolder, all exported files are in the EXPORT subfolder.

For a native Insight Trader database these subfolders are all contained in the WORKING folder that is itself a subfolder of the WINIT folder. For other formats - Metastock, BodhiOne, and QP databases the WORKING folder is a subfolder of the WINITSYS folder that is in turn a subfolder of the relevant stem directory of the respective database.

If the Insight Trader database is in a folder other than the folder containing the program executable files, any SYSTEMS files will be found in the WORKING\SYSTEMS folder off the WINIT folder or in the folder containing the program executable files if this has been given a name different from the default name WINIT. All other subfolders will be in the WORKING folder off the folder containing the main database.

The WORKING folder contains most of the files that the user changes with the exception of notes and alarms in the F2 notepad. These others are contained within the security data files themselves for a native Insight Trader database or, for foreign databases, they will be found in the Notes folder off the WINITSYS folder.

By transferring the WORKING folder from one Insight Trader accessible database to another you should be able to transfer your saved charts, systems, reference files, portfolios and configurations. For foreign databases the Notes folder should also be transferred. This procedure should only be undertaken by users who are familiar with copying of directories from one part of their hard disk to another.

White Space before Chart Axis

Some people like space to be available between the last day plotted and the right hand axis. You can set here the default number of days of white space you need to extend trendlines into the future for example. This will apply to all charts plotted. However, you can also customise white space for individual charts when you set the X-axis date range using speed key **X** or in the Second Form that appears on choosing **View/Chart specs** from the main menu. Choosing @+10 in the second date limit will set the later limit 10 days from today.

Paths for Alarm Sounds

Here you can specify two “wave” files that will be used as the siren alarm to be sounded whenever files, for securities that have hit their up or down stops, are loaded. Alarms are triggered when the low for the day hits or falls below the **Alarm below** stop set in the F2 Notepad. Similarly if the high for the

day hits or exceeds the Alarm above stop then the siren will also sound. If the **Alarm on close** option has been checked on the F2 notepad (Fig. 2.20) then the alarms will activate on the closing price rather than the high or low prices.

The sounding of the siren can be enabled/disabled from the menu under **Format/Alarm status** although a prominent visual indication will still appear on the charts.

Many suitable wave files with the extension ".WAV" can be found in the \WINDOWS\MEDIA directory. By double clicking on such files under Windows Explorer their respective sounds will be generated to allow you to experiment with and select one for the purpose.

Command Line for Data Vendor

If you have proprietary software from a data vendor for downloading data into the current directory you can then put the command line here to enable you to access that software directly from within the Insight Trader program under the **Utilities/Data service download** menu option. This facility is entirely optional.

This option can be used to run other programs apart from that of your data vendor by inserting the appropriate command line here.

Price and Volume Factors

For each database that you are using you must specify on the place provided on this form whether your database is in dollars or cents and whether the volumes are kept in singles, 100's, 1000's or whatever.

If the databases have not been specified then any native Insight Trader database will be assumed to have prices in cents and volumes in 100's while Metastock, BodhiOne and Quotes Plus will be assumed to be in dollars and volume in singles.

NB. You must check this separately for each database that you access.

Printed Charts

These options allow you to specify whether you wish your printer to produce charts in colour or black and white. Selecting the colour option for a black and white printer may print your charts in shades of grey which, depending on the colours you have chosen, could cause certain lines to disappear altogether.

You can select a line density between 0 and 4 for your printed charts and if you want your moving averages to be plotted as dotted and dashed lines rather than solid lines check the appropriate box here.

Display Info on Chart

The section 'Display info on chart' at the bottom left of the dialog allows you to customise the various pieces of information that you wish to show on screen. It enables you to reduce clutter by omitting those items you do not need. These optional items include:

1) Splits/issues lines
2) Alarm levels
3) Indicator values on the subchart
4) Scale 0.00
5) %/price change
6) Ex dividend
7) % off High/Low

These options allow the display of:

1) The vertical dotted Splits and Issues lines

2) The Alarm banners and Alarm Above, Below and Soft stop horizontal dotted lines

3) The numerical values of the subchart indicators

4) A forced display of 2 dec places for databases in dollars. It also forces display of full numbers, for all databases, rather than the scientific 'E format' (eg E+8) that reduces very large or very small numbers to manageable size.

5) The percentage price change in the caption bar of the chart window

6) The Ex-Dividend in the caption bar of the chart window

7) (H-58%) (L+10%) (H-S=35%) (C-S=22%) that provide a percentage distance that the current price is below a recent High and above a recent Low, and the distance that your hard stop is away from the recent high and the last price traded. The period for the recent high and low is set as a number of calendar days prior to the date of the last period in the file. By default all options are on and the period for determination of the last highs and lows is 720 calendar days.

Other Options

Check the boxes against the other options as appropriate for logarithmic scaling, grids on X and Y axes, volume logarithmic and maximise new charts. Choosing **Maximise new charts** will automatically maximise the windows of any new charts added to your working area. However remember that as you are adding charts there may be other charts that you have created previously hidden underneath the currently maximised one. To reveal these press the **Down Arrow** to restore the currently maximised chart to its original unmaximised position.

Allow multiple instances enables you to have more than one copy of Insight Trader operational simultaneously but it will warn you before it launches the second instance. If it is not ticked then any attempt to launch another instance of the program will fail but will cause the window of the one currently running to maximise.

Use old pfolio manager should be ticked only if you wish to use the old portfolio manager, supplied with previous versions of Insight Trader in place of the new one. It is possible to easily switch between them at will with this check box.

Partial bar to period end allows an uncompleted bar to display at what would be the end of its period rather than on the date the last day's contribution to it.- ie a partly formed monthly bar at the 2/7/04 can

optionally be positioned on 30/7/04 rather than on the 2/7/04. This option is available only in **compressed** mode for weekly or monthly.

Scroll Anchor. You can scroll charts in a day-by-day mode where pressing the keys F7, F8 or “<”,">" or using the mouse wheel to practice your trading technique. In default mode it will always retain a fixed number of days on screen where as one day is added to the front of the chart the oldest day drops off the end. You can, however, choose to anchor the first day on the chart to always remain the first day on the chart by placing a ticking this option. In this second method the number of days displayed on screen will increase by one each time the F8 or ">" key is pressed.

Encrypt docs with WinZip. For security of sensitive portfolio document files such as scanned bank statements you can easily encrypt these as they are being dropped on to the Account Transaction dialog. It is necessary that WinZip be installed in the 'Program Files' folder along with its "commandline addon".

When the dialog box is correct select **OK** to accept and **Yes** when asked to save the configuration.

Some of these options can be overridden elsewhere in the program. There are other options such as the **Alarm status** from the **Format** menu and also weeklength and indicator time constants that are not on this form. There is therefore also the provision to **Save configuration** from the **Format** menu without going into the **Preferences** dialog box.

Chapter 7

Management of Data

Overview

Before we can draw any chart we need to supply the computer with the necessary data, ie. the historical information on price and volume changes over time. The program organises this information into data files, which need to be created and then kept updated on a regular basis to record subsequent trading activity.

File creation and regular updating can be done either automatically via the internet from a data service, or manually where the information is punched in from the keyboard.

We will be examining the following aspects of files:

- Single and double precision data storage
- Structure of an IT data file
- File Manipulation
  - Creating
  - Viewing/Editing
  - Saving
  - Loading
  - Browsing
  - Erasing
- Modifying Files
  - Checking
  - Filling
  - Adjusting
  - Merging
  - Exporting
  - Importing

Single and Double Precision

Only a few years ago the costs of memory storage and disk storage for data were major considerations so attempts were made to reduce these as far as possible. One way to reduce costs was to store numbers in single precision which meant that you were limited to numbers with say five significant digits eg 4837.3. This meant that you could not accurately represent numbers such as 1234837.3.

As prices of memory chips and hard disks have fallen to a fraction of their original levels, reducing these costs is no longer a major issue. Therefore we have given you the option of keeping your data files in either double precision or single precision.

The advantages of double precision are that you can display your data in eight significant digits of precision with up to four decimal places allowing values such as 115,794.32 11,579.418 or 1125.5794 to be displayed. More importantly it will also greatly reduce the problem of occasional large spikes in volume, or error spikes in price, which can permanently reset the precision of the whole file. Moreover, double precision is the native mode of 32 bit processors and as such is actually faster than single precision.

The disadvantages of double precision are that it requires twice the disk space to store the file compared with single precision. Once you have converted a file to double precision you cannot then change it back to single precision unless you replace it from a backup etc. However, it would be unlikely that you would want to convert back.

You can choose to either convert your whole database for double precision or only selected files. After you have converted any file, all subsequent data in that file will be able to accept the increased precision. However, it will not allow previously recorded data to be displayed in double precision unless that file is reprocessed from the beginning.

If you were to convert your whole ASX database you will need to have available approximately 25 Mb extra of disk space. The exact value will depend on the size of your hard drive partition and whether you are running FAT16, FAT32 or NTFS.

To do a total conversion to double precision set the option in the Datacapture utility configuration "All files in double precision" as described in Chapter 8. Whenever a file is updated by Datacapture during a download it will be resaved in the new format. Before you do such a total conversion it would be advisable to backup your whole database in the unlikely event you wished to convert back to single precision. Any files not updated during this Datacapture process will remain in single precision.

To convert an individual file, rather than the whole database, to double precision simply load the RAW (non-%) data file (rather than the adjusted % data file) using Toolbar button 10 and save the file using Toolbar button 9, checking the box "Save in double precision" before pressing OK. Next time you download, the % file will also be updated. If you want the % file to be updated immediately, simply select from the menu Edit/Adjust issues and save the file as ABC% or whatever the code is.

All tick data files are stored in double precision.

If you convert any files to double precision you must use only the new utilities that can handle the new file format ie Datacapture v9 and Database Manager v9 or later. Previous versions of Insight Trader ie WinIT32 v 8.3, DOSIT v 8.1 and earlier do not support double precision.

Structure of an IT data file

This section is included as a technical reference only for those users who have an interest in constructing their own Insight Trader files. It can be skipped by most other users.

The Insight Trader file structure is extremely flexible. Like any database file it is composed of "records" where each record is the set of data for any one day. Each record is divided into "fields" which are slots into which the individual values for the various types of data are inserted. For example a file for ANZ might contain the following record for 14/2/97:

250214 623 656 620 661 573

Field 1 is the date 25/02/14, field 2 is the open, field 3 is the high, field 4 is the low, field 5 is the close and field 6 is the volume. The record for the 15th will be similar except that the values in the six fields will be different.

All records in any given data file must have the same number of fields. The maximum number of fields in any record is 20 and the minimum is 2. The total number of records in any file is in practice unlimited. There is also no limit to the number of data files that can exist in a particular directory (except for any imposed by the operating system itself). Also you are not required to have a record for every day so that if a security does not trade every day you do not need to insert dummy records for the notrades days.

There are 9 different types of data fields that you can use:

D	-	date
O	-	open
H	-	high
L	-	low
C	-	close
V	-	volume
I	-	open interest
A	-	accumulator
X	-	unrestricted field

The first 7 field types are self explanatory. The X data type is not specific and can represent anything that does not require to be treated in any special way. The A data type is an accumulator used for advance/decline type indices where daily entries (usually both + and -) are accumulated internally to give a running total rather than storing them directly as the numbers are input.

There are several restrictions that must be observed for these 9 data types:

Field 1 must be the only D field

HLC must always appear together as a block

O must always be followed by HLC

I must only follow V

V must follow a price field to which its volume relates (either HLC or X)

Because field one is always D it is normally omitted from the specification. The most common file structures that you will meet are:

HLCV	-	used if open is not available
OHLCV	-	used for most shares
OHLCVI	-	used for commodities and futures
X	-	used for single values
XV	-	used for price and volume only

Because these are the most commonly used file structures there are template files in the data directory for each of these types that can be loaded and used to create new files with the required structure.

Although the above structures are the most common there are many other combinations that you can use. For example the WORLD and SYDNEY files that come with your program have the following structures respectively:

HLCVAAAXXXXXXXXXXXXX

XXXXXXXXXXXAA

Other structures could be:

HLCVHLCVHLCVHLCVAAA

XXXXXXXXXXXXXXXXXXX

or whatever your requirements might be, consistent with the restrictions mentioned above.

Although it is possible to accommodate more than one security in a single file it is recommended that, in general, structures such as the second last listed above only be used for specialised purposes.

File Manipulation

Creating Files

Most of the time you will not need to create a file as the program does it for you automatically, if a file by that name does not currently exist. If you are downloading via the internet from a data service, or you are manually updating files using the BULK utility, any

new files will be initialised automatically for you. Most people, in fact, never create any file themselves and this section can be skipped by most users.

When downloading data via internet, or manually entering data using BULK, files are automatically initialised by the utility Datacapture. You do not have to manually create individual files for each security.

However, there are occasions when you might want to create a file to your own specifications and it can be done in the following manner. Before attempting to create a file you should familiarise yourself with the structure of an IT file as described in the section above. For most of the common file structures there exist in your data directory template files that can be simply loaded up, modified to your needs and saved under the name you require.

An easier alternative to setting up files from scratch each time is to load one of the preexisting template files - HLCV, OHLCV, or OHLCVI, alter any data on the dialog under the menu **Edit / Define data file** to suit, and save as a copy with a new name. (This leaves the original HLCV file intact)

To create a new file from scratch you must choose **File** from the main menu and select **Create new data file**, give the file a name and define its structure including the type of information which you wish to include in it. The first dialog appears asking you to give a filename of up to 8 characters without an extension.

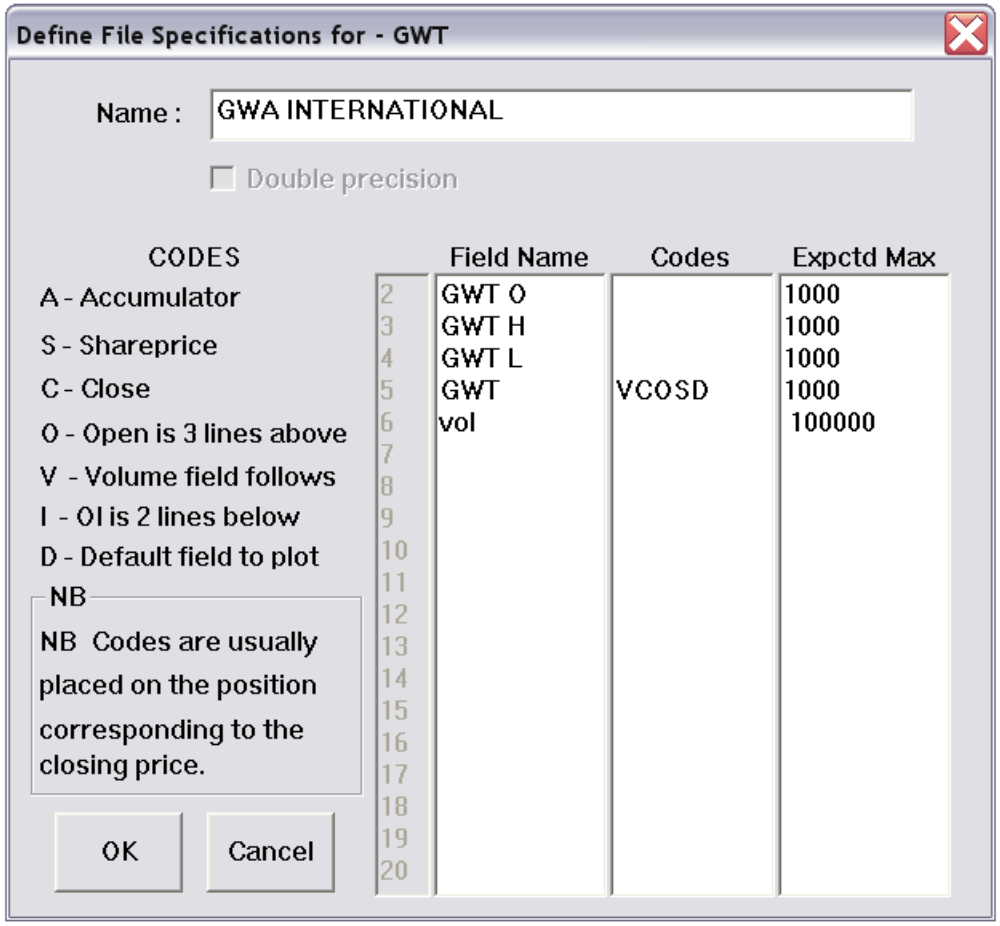


Fig 7.1

You are then presented with a form consisting of a line along the top for inputting a title which will be printed at the top of every chart along with the security name. Eg you may wish to type in Broken Hill Proprietary in the BHP file and each chart constructed from this file will have BHP - "BHP Billiton Ltd" printed in the title.

If the file is currently set to double precision then the appropriate check box will be ticked. Note that it is not possible to change the precision of the file from this dialog. To change an individual file to double precision you must save the file and tick the check box on the save file dialog as described later in this chapter. To save your whole database in double precision you must do this through Datacapture as described in Chapter 8.

Then there are three columns which must be completed with the details of the data that you wish to include in the file. The first of the columns is for the field name, the second for a code indicating the type of data it represents and the third the maximum value you expect it to reach. The different data types, together with their respective codes, are as follows:

Data Type		**Code**
For:		**Put:**
1.	The date	
2.	Opening price (of an OHLC set)	O (on the close)
3.	High	
4.	Low	
5.	Close (of a HLC set)	C (on the close)
6.	Volume	V (on the close)
7.	Open interest (of an HLCVI set)	I (on the close)
8.	Accumulators	A (on the accumulator)
9.	Unrestricted field	
Shares (Subject to issues/splits)		S (on the close)
Default field (for plotting)		D

(Several codes can be placed together in the one entry)

The date is always the first field.

High-Low-Close Sets must be three fields following in that order and the close must be specified by placing a C in its code column.

If a volume field follows the close to which it refers, a V must be placed in the code column for the CLOSE. A volume field can also follow an unrestricted field.

If an opening price is specified, it must precede the high of the HLC set and an O must be placed in the code column for the CLOSE.

If open interest is specified, it must follow a volume and an I must be placed in the code column for the close or the unrestricted price field to which the volume refers.

Accumulators are data types for which you enter a difference, or change, for each day (week, month). These are then internally added to the accumulated total, up to the current date, but are displayed and entered as differences in the database portion of the program. The most common accumulator is the advance/decline where the number of shares that have declined in value over a period is subtracted from the number that have advanced in value. An accumulating field must have an A placed in its code column.

Because share prices can be diluted by occasional splits, issues and reconstructions, provision must be made for correcting previous prices for the dilution or concentration factors. Share prices are therefore identified by placing an S in the code column for the share price CLOSE (only). You cannot perform the above share price adjustments on a file if the S is not in the CLOSE field. (You will get a message of "No shares specified")

The default field for plotting on the Y-axis, which is set when the file is first loaded, is indicated by placing a D in its adjacent code column. Once the file is loaded, if required, the field for plotting can easily be changed for another in the **Define calculations and date range** form discussed in Chapter 4.

The third column contains an estimate of the maximum value that a field will reach. (For economy of memory, all values are stored as two-byte integers with a range of values between ±32 000. This integer must then be multiplied by a factor, which is calculated from the maximum value entered in column three, to give a scaled number for the actual field value. It follows that all fields are limited to about five digits of precision, which is sufficient for most purposes.)

The maximum number that can be stored will be at least as great as the estimated maximum value, but can be up to ten times as great. If a field is later entered with a value greater than that allowed by the number in column three, then a warning message will appear and will abort the editing to allow you to either correct the entry or to update this maximum value to a larger number before editing is recommenced. If it is necessary to increase the value it should be increased by a factor of 10.

When the details for all fields have been entered and corrected, pressing **OK** will accept the entered structure as defining the file.

The **View/edit records** dialog box will appear from which data input can be commenced for the daily records. See the next section for details on entering data. For the moment you would only need to create one (maybe fictitious) record and then save the file by clicking the **Save file** button and inputting an appropriate name to save if different from the one you first specified.

Viewing/Editing

This particular option allows you to both view the individual records in your data file and to change them by altering existing records, deleting records, inserting records or appending additional records to the end of your file.

(If you are manually and regularly updating a number of securities then the use of the BULK utility will greatly speed up this process. Very few users will ever use this facility. This is discussed in Chapter 8.)

To enter this mode click button 8 **View data records** from the main toolbar or choose the item **View data records** item under the **Edit** menu. **Alt I** is the speedkey to access this dialog which will appear displaying the final record in the currently resident data file.

If the currently loaded file had been an adjusted or compressed file then you would have been warned and asked if you wished to load the appropriate unadjusted or uncompressed file instead. Normally you would answer **Yes** to this question.

The actual data for that record is displayed in the long white vertical edit box. The field names for each of the items is shown in the long grey edit box to the left. These field names cannot be changed from this form but can be altered from the **Define file** dialog box that we encountered previously.

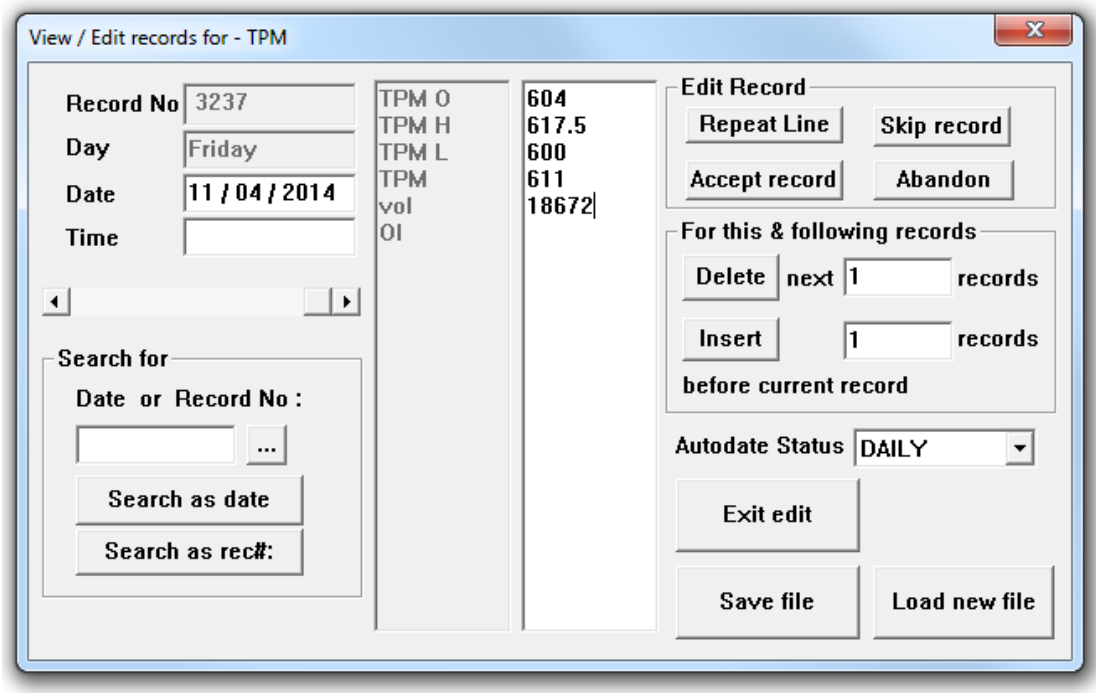


Fig 7.2

On the left of the form you have the record number and the day of the week that cannot be edited but underneath is the date and time that you can change. The slider bar under the date and time allows you to scroll through the records of the file by moving the thumbtrack button left or right.

The time box is only relevant for intraday tick data files which have a caret "^" appended to their file names.

Clicking on the arrow buttons at the end of the scroll bars will move one record at a time. Clicking inside the scroll bars will move to the beginning of the next or previous year (or in the case of tick files to the beginning of the next or previous day). Taking the thumbtrack button to the furthest position on the right will present a newly dated blank form ready to be filled in and appended to the existing data file.

You can search for a particular record number or a particular date (*ddmmyy*) by inserting the relevant value in the edit box. Click the appropriate button below and the particular record you are seeking will be displayed.

The right hand side of the form contains the controls to change or edit the file in several ways. By clicking the mouse cursor in the large edit box to the right you can enter or edit numbers manually. In the **Edit record** group of buttons you can repeat the line containing the edit caret on to the line below it, you can accept the record with its changes or you can abandon the changes for that record and start again or if it is a completely new record you can skip its date entirely.

As you are appending records to the end of a file by editing in this way, after you accept a new record a blank one will be presented to you for further input. This new record will be automatically dated to the next day, week or month depending on the autodate status indicated in the list box - Daily, Weekly, Monthly. If autodate status is off there will be no automatic dating of records and you will have to enter the dates manually yourself.

In addition to these facilities you can delete records by placing the number of records (from and including the current one) that you wish to remove. You can also insert records before the current record by entering the number of records required to be inserted. They will be autodated depending on the setting of the autodate status.

When you are satisfied with the changes you have made click **Save file** to save it to disk. Since no permanent changes are made to the file until you save it you can abandon your whole edit session by clicking Exit edit. Should you be using this dialog to view records only then you should not press the **Save file** button but use **Exit edit** to leave the form.

Saving data file

To save the currently resident data file click button 9 **Save data file** on the main toolbar or select **Save data file** from the **File** menu. The speedkey for this operation is **Alt A**. You will be presented with the **Save file** dialog box where you can leave the filename as it is, edit it to what you want, or browse your disk to see what already exists.

You are also given the opportunity to permanently convert the file to double precision by ticking the appropriate check box.

When you have altered the name to what you require then click **OK.** If the file already exists on disk you will be asked if you wish to overwrite it.

Loading data file

To load an existing data file click button 10 **Data management - Load/erase/merge** on the main toolbar or access it from the **File** menu by selecting the **Data file management** item or use the speedkey **Alt K** and the following dialog box will appear. It is the same dialog as shown in fig 2.14 except that the **Load into memory** radio button is selected.

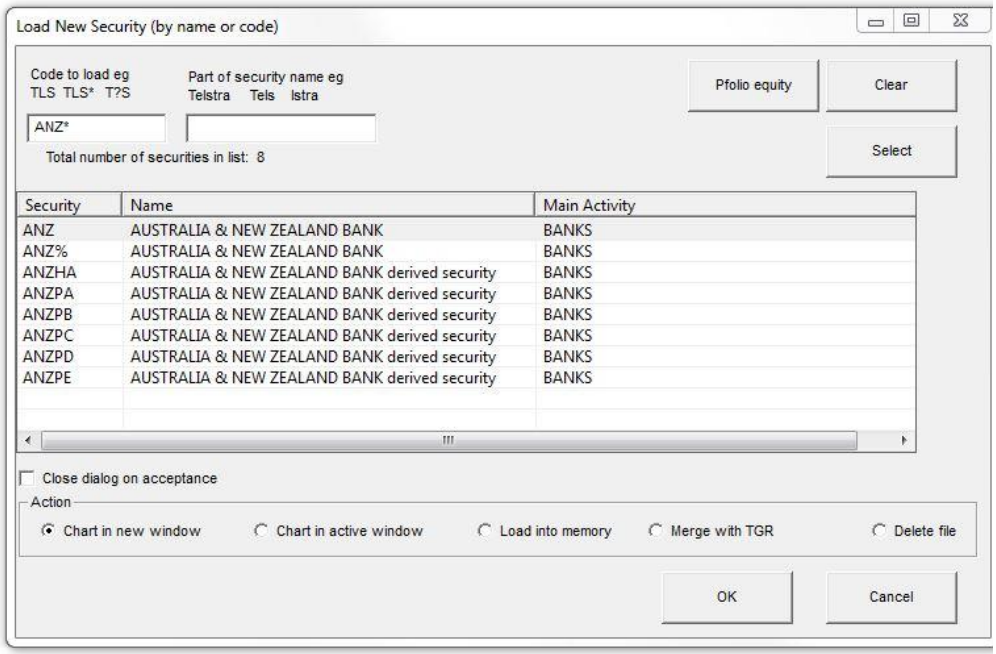

Load New Security (by name or code)
Code to load eg
TLS TLS* T?S
Part of security name eg
Telstra Tels Istra
Pfolio equity
Clear
ANZ*
Select
Total number of securities in list: 8
Security
Name
Main Activity
ANZ AUSTRALIA & NEW ZEALAND BANK BANKS
ANZ% AUSTRALIA & NEW ZEALAND BANK BANKS
ANZHA AUSTRALIA & NEW ZEALAND BANK derived security BANKS
ANZPA AUSTRALIA & NEW ZEALAND BANK derived security BANKS
ANZPB AUSTRALIA & NEW ZEALAND BANK derived security BANKS
ANZPC AUSTRALIA & NEW ZEALAND BANK derived security BANKS
ANZPD AUSTRALIA & NEW ZEALAND BANK derived security BANKS
ANZPE AUSTRALIA & NEW ZEALAND BANK derived security BANKS
Close dialog on acceptance
Action
Chart in new window
Chart in active window
Load into memory
Merge with TGR
Delete file
OK
Cancel

Fig 7.3

If you know the code of your new security then just type in say **NAB** in the first edit box and hit **ENTER** or click **OK**. If you do not know its code then type in its name or part of its name in the second edit box and click Select. The program will then search for all codes matching the name and tabulate these in a list below with security code, name and main activity. This table can be sorted on any column simply by clicking on any column heading.

Click the required one (if not already highlighted). You will also notice on the dialog box five **Action** radio buttons with **Load into memory** ticked**.** Click on **Load into memory** if this is not the currently active one. Then click OK and your security will be loaded into memory ready for viewing or editing.

If you had wished to see and choose from all securities in the directory then leave the two edit boxes at the top of the dialog box empty (using the clear button if convenient) and click **Select**. The list box will then fill with all the codes in the directory. Select the one you want and click on it to highlight it then click **OK** to load it.

Had you instead wished to see only those codes starting with A (or ANZ) then type A* (or ANZ*) in the edit box, click **Select** and the list box will accumulate all the codes commencing with A or (ANZ). Click the one you want and then click **OK.**

Note that the dialog box will close after the security has been charted. Should you wish to select and load more than one from the list simply uncheck the box **Close dialog on acceptance**. This option will then remain active as your default for subsequent sessions.

It is often useful under these circumstances to resize this dialog box by dragging its right hand edge to the left until only the security codes are showing. After shifting the narrowed dialog box out of the way to a convenient point on the screen, charts of several securities may then be added to the working area by consecutively double clicking on their codes.

Browsing Data File

Sometimes it is more convenient to view the data in a file in a browse mode where 19 records at a time can be perused rather than examining one record at a time. To do this choose **Browse data file** from the **Edit** menu. A list box will appear displaying data for the most recent dates. You are then able to scroll through the whole file. If your file is very big you might need to press the **Next block** button to see the next section of the data file. Click **Cancel** to quit browse.

Deleting Data File

The process for deleting an existing data file from your database is the same as that for loading a data file (see **Loading data file** above) except that you will click the radio button **Delete file** in the **Action** group. You will be asked to confirm your action before it is implemented.

Portfolio Equity Curves

The **Pfolio Equity** button allows you to immediately select all available Portfolio Equity files generated from your portfolios in the Portfolio Manager. When the list appears double click the one you require and the relevant equity curve will be immediately charted.

Modifying Files

Checking Data File

Should you have cause to suspect that your data file might contain certain logical errors then you can perform specific checks on it by choosing **Check data file** from the **Edit** menu. You will be asked whether you wish to search for:

- Dates out of order
- Zeros in any field
- High Low Close inconsistencies

If you choose to check for zeros then you will be requested to input the field that you wish to check. Remember that the number you input is the field number taking the date as field 1. If any inconsistencies are found you will be told the record number that is the problem. When all record numbers have been noted you will be told that the check is complete and you can edit the various records to correct any problems you have found as described in the **Viewing/Editing** section above.

Filling Data File

This facility is usually only applicable to compound files such as WORLD (WORLDFIL), SYDNEY (SYDFIL) where all the data in any record may not be available at the one time or where some securities are not traded on certain days while others are. Ordinary simple security files do not normally need to be filled.

Often when entering data by hand it is necessary to omit entries because the information has not yet become available or because it is not applicable for that daily record. The field for that day will be set to zero and will show up as a spike on the chart.

If entries are missing it is most convenient to leave them as zeros in your master file as they are then easy to identify as such for later editing. However, for the purposes of plotting and analysis, especially when dividing by a field with a missing value, it is desirable to "fill" these blank entries with the last recorded non-zero value for that field.

This is achieved by using the **Fill** option from the **Edit** menu and specifying the field number which you wish to fill. If all fields are to be filled then type **all**. To abort this process enter nothing and then press **ENTER**. A file that has been filled is immediately renamed to NONAME.DAT to prevent accidental overwriting of the masterfile. If you wish to save the filled file choose the **Save data file** option and provide a name which is different from that of your masterfile.

NB Before filling a file, first check to see whether there are "zeros" or blank entries in the first record. If so, enter some satisfactory non-zero number to avoid filling subsequent entries with zeros.

Adjusting Shares for Issues etc

Share prices are subject to splits, issues, reconstructions, premium and capital returns and should be corrected for the diluting effects which are a consequence of these events. The Database Manager service (see Chapter 8) performs this function automatically for you via the web unless you wish to do it manually yourself as described below.

You will first need to enter the necessary information in the data file and then carry out the operations to adjust previous prices in the file.

For shares which are subject to such adjustments, Insight Trader maintains two separate files

- An unadjusted raw data file which contains all the original prices as well as the information required to perform any adjustments.
- A file which is an adjusted form of the raw data file

The adjusted file has the same filename as the unadjusted file except that it has a % character appended to it eg BHP is the raw data file and BHP% is the adjusted file.

This enables Insight Trader to access the original information at any time to readjust a previously incorrectly adjusted file and also to access original prices for valuing portfolios at any time in the past. If this information has been adjusted for charting purposes it would give incorrect data for portfolio calculation.

However, this does not apply to tick files where there is not a separate unadjusted and adjusted file. Once the adjustments are made to a tick file the terms of the adjustment are removed from the file and the file is saved under its original name.

If you are updating your database by downloading from a data service, or using the BULK manual update facility, although the % files are actually dependent files, they are automatically recreated and updated by Datacapture every time it is run. Such files therefore do not have to be saved originally as dependent files. If Datacapture is saving a file in which it detects adjustment information it will automatically also adjust this file and save it to a corresponding % file.

Entering Adjustment Information

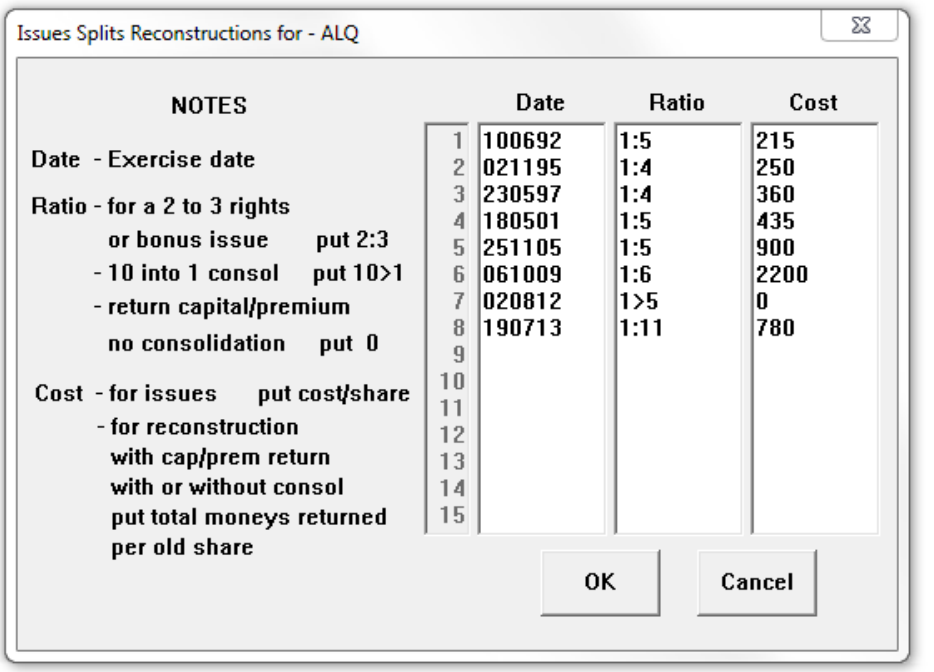


Fig 7.4

To enter adjustment information for the currently loaded file choose **Issues splits** from the **Edit** menu. You may be informed that you are about to edit the adjusted file in which case you should choose to load the unadjusted file instead. The following dialog box will appear consisting of three columns to allow details of up to 15 issues, splits and reconstructions to be entered.

The first column is for the dates of each issue (in the form *ddmmyy*). The date of each issue is the date that the shares went ex rights etc. In the second column, the ratio of the number of shares offered for every share held is entered - eg. a 1 for 4 issue will be entered as 1:4, a 2 for 3 issue will be 2:3. The third column is for the cost of each new share issued. With reconstructions, a 5 into 1 reconstruction will be entered as 5>1. With splits, a 1 into 2 split would be entered as 1>2.

For example:

A 3 for 1 rights issue with an exercise date of 251213 and a cost of 100 cents per unit is specified as:

Date	Ratio	Cost
251213	3:1	100

If this was a bonus issue it would be entered as:

251213	3:1	0

If this was a 1 into 2 split it would be entered as:

251213	1>2	0

A reconstruction where 10 shares are consolidated into 1:

251213	10>1	0

If there is a simultaneous return of capital and/or premium enter the cost as the total moneys returned per old share:

251213	10>1	15

If there is a capital and/or premium return without consolidation then simply set the ratio as 0 and the cost equal to the total moneys returned per old share:

251213	0	15

If the data in the file has already been adjusted for the dilution effects of issues, the information for these issues should not be included in this form.

Adjusting the File

Choosing **Adjust issues** from the **Edit** menu will automatically adjust all share prices in the file according to the issue information which has been specified in the Issues/splits specification dialog box above.

The file will be renamed to append a % sign to the code to avoid accidentally overwriting the masterfile, which should be kept in its raw unadjusted form. The adjusted file can be saved to disk, if required, preferably as suggested **with a % character appended eg BHP and BHP%.**

Merging

General

It is possible to merge two data files to produce a composite file. This will allow you to:

- Append records to the beginning/end of a file from another file.
- Replace one or more fields, over a range of dates, with others from another file.
- Rearrange fields within a file.
- Increase/reduce the number of fields in a file.

If you wish to merge two files you first need to load into memory the file with the earlier starting date (using the method described above under **Loading data file**). This file will be referred to as the **Current file C**. Then you need to access the same dialog box again and enter the name of the other file (referred to as the **Import file I**) that you wish to merge with the current file to produce the **Final composite file F**. Click the **Action** button **Merge with *XYZ*** and then click **OK** to accept.

If Date Ranges Overlap

> It is important to understand that when C and I are merged, if and where their date ranges overlap, records from I will replace those for dates that existed originally in file C. Those records in I that do not have corresponding dates in C will be inserted in their appropriate positions in F.

To achieve a particular result it is sometimes necessary to delete records from the beginning or end of one of the two files C and I to remove the overlap and to save them under temporary names, before undertaking the merging process using these temporary files instead of the originals.

The Merge Files Dialog Box

After a file has been selected for merging you are presented with the following dialog box:

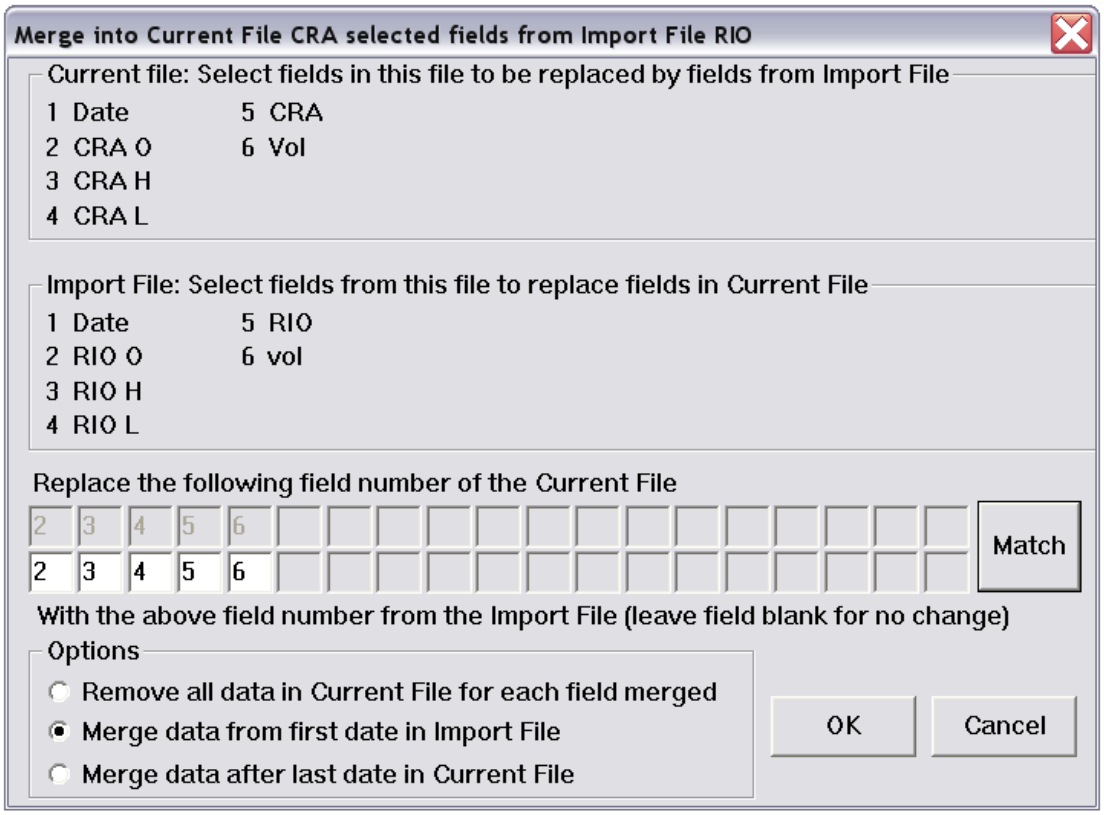

Merge into Current File CRA selected fields from Import File RIO
Current file: Select fields in this file to be replaced by fields from Import File
1 Date
2 CRA O
3 CRA H
4 CRA L
5 CRA
6 Vol
Import File: Select fields from this file to replace fields in Current File
1 Date
2 RIO O
3 RIO H
4 RIO L
5 RIO
6 vol
Replace the following field number of the Current File
2 3 4 5 6
2 3 4 5 6
Match
With the above field number from the Import File (leave field blank for no change)
Options
Remove all data in Current File for each field merged
Merge data from first date in Import File
Merge data after last date in Current File
OK
Cancel

Fig 7.5

At the top there is a list of the field numbers and corresponding fields for both the current file and the import file. Below this there two rows of edit boxes - the top one containing the numbers 2-20 representing the field numbers of the current file. The bottom boxes that are white need to have inserted the field numbers in the import file that are to replace the corresponding field numbers of the current file above. This process is repeated for all fields

you wish to be replaced. If the bottom boxes are to be numbered identically to those at the top then pressing the **Match** button will achieve this automatically.

Below there is a group of **Options** for merging from which you must select one:

- The first option will completely remove all original data from the current file. If the field in any record in the current file is not overwritten by a value from the field for the corresponding date in the import file then that field position will be set to zero.
- The second option will merge data from file I beginning with the first date in the import file
- The third option will only start merging data from file I from the last date in the current file.

Common Merging Operations

Below is a summary of the steps necessary to achieve the indicated modifications with a current file C and an import file I.

To append records from one file to the beginning or end of another file, where both files have identical field structures:

- If necessary remove any records in either file that are not required. Save the modified files as C (for the file with the earlier start date) and I (for the file with the later start date)
- Load file C.
- Choose the merge option and select file I
- Enter the merge field numbers to be identical with their corresponding current field numbers by pressing the **Match** button.
- Select under **Options** either of the last two radio buttons as required

To replace one or more fields in file C with fields from file I over a required date range:

- If necessary load file I and remove unwanted records (outside the date range required) and save modified file as ITEMP.
- Load file C.
- Choose the merge option and select file I (or ITEMP) as appropriate.
- Specify field positions in file I that are to replace the corresponding field positions in file C.
- If the fields being replaced are not the same type as the substitute fields, or if you wish to blank out all original entries for that field in file C, check the first radio button under **Options** or otherwise choose buttons 2 or 3 as appropriate

To rearrange the order of fields in file C that is currently resident:

- Choose the merge option and select file C (ie. merge file C into itself).
- Specify field positions in import file C that are to replace the corresponding field positions in current file C.

- Check radio button 1 under **Options**

**** To increase/reduce the number of fields in a file***

- Choose *Create New File* from the New File Menu and set up a file specification containing the number of fields required for the new file structure but giving only dummy names in column 1 (say all "a") and dummy maximum values in column 3 (say all "1"). This is file C.
- Edit the first record and enter the starting date required and accept.
- Choose the merge option and select file I.
- Specify the field positions in file I that are to replace the corresponding fields in file C
- Click radio button 1 under **Options**.

Dealing with Old and Reused Codes

When using the Portfolio Manager you need to ensure that all security data files relevant to your portfolio are in your database including any files that may have changed their codes, become delisted or their codes reused since you first owned them.

You may find that these files have been moved to the OLDFILES folder from where you can restore them to their original locations. Make sure, however, that if you subscribe to Database Manager that you have also unticked the options 1) Delete old codes from database after merging and 2) Remove delisted companies from the Database Manager configuration dialog otherwise these files will be removed again to the OLDFILES folder the next time that Database Manager is run.

Where the ASX sometimes reuses a previously delisted code, say XYZ, we employ a convention of renaming the old file to Z1-XYZ. If your portfolio contains such a security with a code that has subsequently been reused, then you should ensure the old file Z1-XYZ is installed in the database and that any references to this security in your portfolio are renamed. To change the name and code you should access the button to the right of **Ticker symbol** in the Security Transaction form. Just type in the new code Z1-XYZ and any previous security transactions in the portfolio involving the old code will have their code changed to the new ticker.

Printing and Exporting data

Hardcopy printouts or ASCII or DIF disk files of data from the resident Insight Trader data file may be obtained by choosing **Print/export data** from the **File** menu.

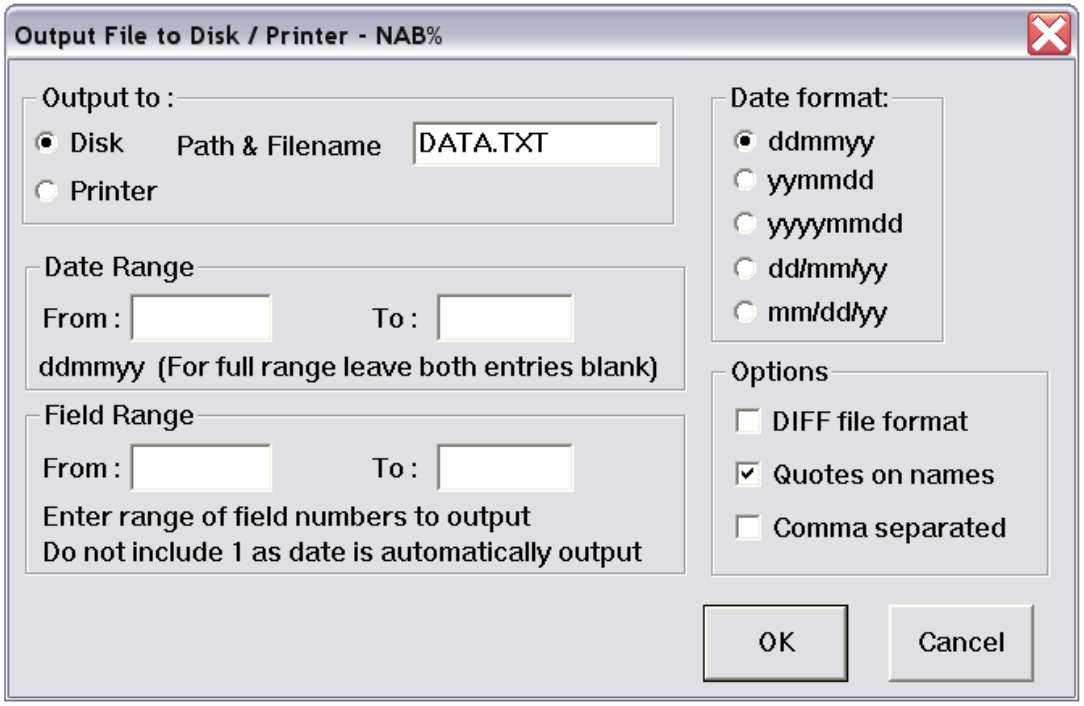


Fig 7.6

Specify in the dialog box:

- the device required (printer or disk)
- the disk filename if appropriate
- the data range needed
- the range of field numbers desired
- the format of the date as one of five types
- Whether a DIF file rather than a normal ASCII file is required
- Whether quotes on names are needed
- Whether output needs to be comma separated or tabulated

If an ASCII disk file is required as input to another program choose the option to enclose the field names in quotes.

Printing to any device may be frozen at any time by pressing any key. If the next key pressed is **ESC** then the file will be truncated at that point but any other key will continue the printing.

DIF files are an old format used to import data into some spreadsheet programs.

Importing files in ASCII format

Provided that they conform to one of a number of simple data structures, ASCII data files can be converted to IT format by selecting the **Datacapture** option of the **Utilities** menu. Set up the record structure and source and destination directories as described in Chapter 8. Note that Datacapture will only import ASCII files with up to a total of 7 fields including the date.

The ability to convert data files in this way allows the data to be interchanged between different programs.

Other Data Formats supported

Insight Trader can now directly read data and chart from four different data formats:

(i) Its own native Insight Trader format as previously	(IT)
(ii) Metastock format (<255 files per directory)	(MS)
(iii) The BodhiOne format	(BO)
(iv) The Quotes Plus Inc QP2® format	(QP)

Establishing a BO or MS Database for Charting within IT

Just log on to the "stem" directory of the appropriate BO or MS database - ie the directory just below the one(s) where the individual data files are stored. This is done from **Format/Preferences** either by typing the name of the stem directory into the box **Path for configuration and data files** or by browsing for the directory on the hard drive.

For example if your data files are stored in:

C:\My Databases\BodhiOne\ASX\A...Z

then either browse for, or type in the name of, the stem directory as:

C:\My Databases\BodhiOne\ASX

Note that with later installations of Bodhi the files would be stored instead under:

C:\Data\BodhiOne\ASX

IT will detect whether it is a valid IT, MS or BO directory and inform you accordingly. (It does not matter what the names of the individual subdirectories off the stem directory are called as it will appear from the program that the securities in them are all in one big directory.) If IT detects that the directory is not any one of these three formats or that the directory does not yet exist then it will ask if you want to create a new valid IT directory around the stem directory that you have specified. For the two foreign formats, IT will create a directory branch WINITSYS off the stem directory to contain all of its working files eg saved charts, portfolio files, list files, Database Manager files, notes etc.

If you are using a BodhiOne database with Insight Trader you can create data files for your own purposes that you can manually update. This has many uses. For example it will allow you to update, chart and value unlisted trusts in your portfolio. The Bodhi Viewer is available on request.

Establishing a QP2® Database for Charting within IT

From the main menu choose **Format/Preferences** and in the box labelled **Path for configuration and data files** enter **C:\IT-QP**. Click OK to accept, OK to establish as and IT directory and OK to save configuration

Running Insight Trader using foreign data formats is only slightly slower than using the normal native format.

Changing Between Directories

This directory that you have just logged on to will be remembered by the program and in future you can rapidly switch between this any other previously logged directories by clicking on the **New directory** button (no 11) on the main toolbar and selecting it from the list by double clicking. You will always know the format of the directory that you are currently logged onto as it will be specified as IT, Metastock, BodhiOne or Quotes Plus in the blue caption bar at the top of the main Insight Trader program window.

Converting Files from Foreign Formats into IT Format

You can manually convert individual files for specific securities one by one by loading each into memory (as you do for charting) and then saving it by clicking on the "Save file" button (No 9) on the main toolbar. The file will be saved into the:

stem..\WINITSYS\DATA

directory if the WINITSYS directory has not yet been split or into the appropriate WINITSYS alphabetic directory otherwise.

To convert the whole database, first log on to the required foreign stem directory to convert. (It is advisable to "split" the WINITSYS directory into alphabetic subdirectories before proceeding by specifying the appropriate directory (ie stem...\WINITSYS) under **Utilities/Split data directory** option.) Then select **Utilities/Import foreign format data** from the menu. The converted IT files will be placed into their appropriate data directories off the WINITSYS directory. You can then actually view these newly converted files in their native IT format by logging on to the

stem..\WINITSYS

directory from the form accessed from **Format/Preferences**. Either type the path into **Path for configuration and data files** or browse for the WINITSYS directory from the small button on the right side of the input box

Highlighter Functionality for Foreign Databases

BodhiOne, Metastock or QP databases are unable to produce the Highlight list generated by Datacapture as these databases are maintained by non-IT applications. If you wish to have the same functionality as provided by the Highlighter in Datacapture then you should load and run the standard System filter *Highlighter method* from the list of Systems - using a reference list containing all securities. The hits displayed in the resulting file HILITE list should include those that would have appeared from the Datacapture Highlighter. Any securities whose alarms have been hit should appear within a separate list file SYSALARMS.LST that is produced whenever the Systems tester is run.

Generate a List of All Codes in a Foreign Database

When using foreign databases eg BodhiOne, Metastock or QuotesPlus a list of all (or selected codes) can be generated from the Load New Security dialog (2nd toolbar button). When the Select button is clicked the list of codes showing in the table below are written to the standard list file SELECTED.LST. This list can then be used as the reference list for filtering in the System tester, autorunning or charting.

Backing up data

Backing up your data files and program files is one of the most important tasks you need to undertake. Just remember that if you have a hard disk crash or data corruption - and such crashes are quite common - then you may not be able to access your data - ever. This loss may represent months or even years of hard work and you will stand forlornly by your computer regretting bitterly that you did not establish a systematic backup procedure.

Remember that if for any reason you have the need to manually copy any files from a CD (eg by using Windows Explorer) then these files may end up as READ ONLY on your hard drive and it may not be possible to update them. You can overcome this by removing the read only attributes using Windows Explorer or alternatively by typing from the \WINIT directory at a DOS or COMMAND prompt:

ATTRIB -R *.* /S

This will remove the read only attributes from all files in the WINIT folder and in any folders within the WINIT folder

Make sure that no Insight Trader software is running when you do this.

IMPORTANT: This problem only arises in earlier versions of Windows

Data can be backed up in many ways using tape backup systems, CD burners, removable hard drives, memory sticks, Microsoft utilities and other backup utilities. You should use one of these systems that backs up your whole hard disk as your main protection and only use other methods as a supplement to your major backup procedure.

It is worth considering using a disk image backup system that create an image of your whole drive and are designed to allow you to restore your system to its original state.

Checking data integrity

From time to time you may wish to check the integrity of your database and to remove foreign files that may have found their way into your data directories, corrupt files or old files etc. (This integrity check differs from the **Check data** option of the **Edit** menu which checks the logical order of dates in the file and the consistency of the High-Low-Close information.)

You perform this check from the **Check data integrity** option of the **Utilities** menu. In the dialog that appears you must enter the directory to check which is usually \WINIT.

Check the options for the operations that you require:

- **Shift bad files to a BADFILES directory**
- **Clean bad ticks from intraday files**
- **Convert live database to new monoformat**
- **Remove alarms from all securities**
- **Check for null records**
- **Shift OLD files to an OLDFILES directory**

The first option will detect and remove foreign, orphaned and corrupt files.

The second option allows you to clean out bad ticks from intraday files with a threshold of the given % deviation from the surrounding ticks.

The third option will convert an old live database to the new monoformat.

The fourth option will remove alarms from all securities.

The fifth option will check for null records with “zero” dates and empty prices

The sixth option allows you to remove old files by entering the date for which you wish to remove any files where the last record in the file is any earlier than this date.

Unless you really wish to remove old files it is recommended that you do not choose the fifth option as these old files can be required by Database Manager to merge where a company has changed its name etc and by the Portfolio Manager to value portfolios at past dates.
However, if you do wish to remove old files then use this method rather than doing it through non IT utilities when incomplete removal of files can cause problems.

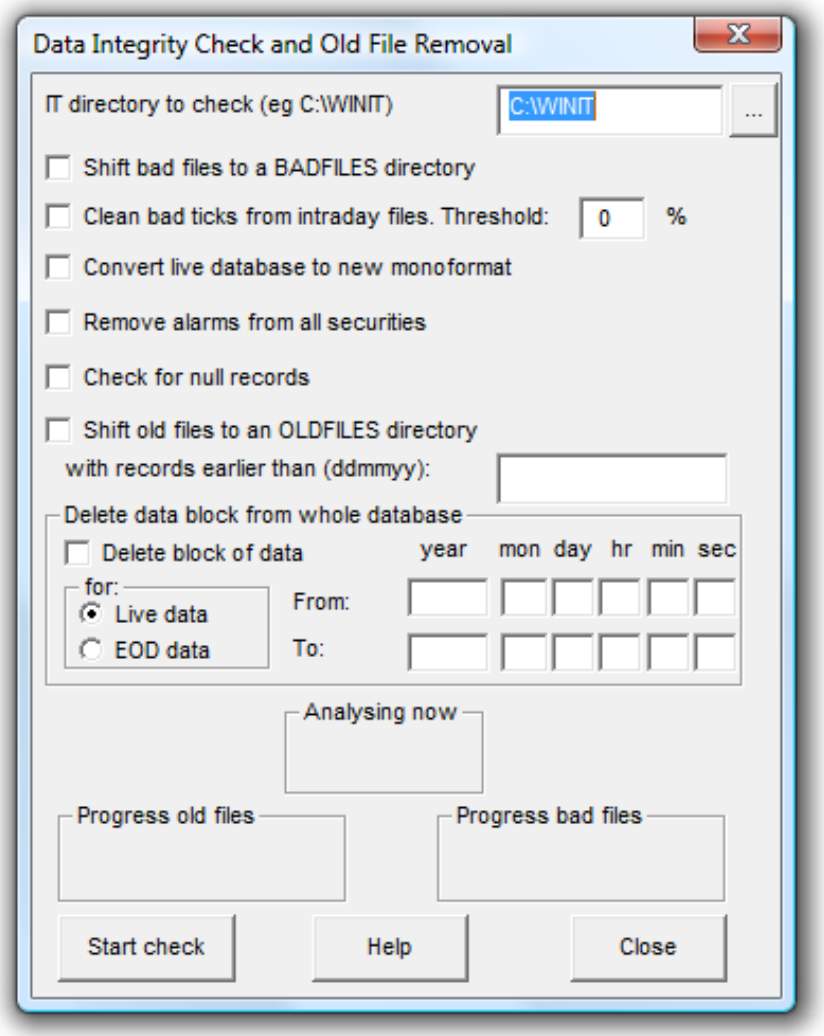


Fig 7.7

If a file is so badly corrupted that it will cause the program to crash then there will be two codes displayed in the blue caption bar of the **Check data integrity** dialog box. One of these will be the corrupt file. Take note of the two codes before proceeding further. Then test to see if both codes can be charted. If one of them causes the program to crash then this will be the corrupt file.

If the two files were ANZ and AAP then you should first attempt to chart ANZ. If it charts successfully then you should press the key **N** (for New) and enter **ANZ-%** in the dialog box as the code to chart in an attempt to chart the unadjusted file. If this crashes then this is the corrupt file. If not then do the same with AAP (and **AAP-%**). Delete any corrupt files by pressing **ALT K** and entering AAP* then **Select**. Delete for example both AAP and AAP% if AAP has been identified as corrupt.

(When charting files it is the adjusted or % file say BHP% that is loaded by default. If you want the unadjusted file instead you need to press **N** for New and specify BHP-%. Normally when a file becomes corrupted it is the unadjusted or non-% file that is affected.)

Deleting Block of Data from Whole Database

Sometimes bad data may be inserted into all securities in your End-of-Day or Live database for a particular day or time. You can remove this bad data en masse from all securities from the form. Tick the checkbox **Delete block of data** and specify whether it is for Live or End-of-Day data.

(a) To remove a single day from all securities in your EOD database specify the Year/Month/Day only in the **From:** option and leave the **To:** option blank.

(b) To remove a range of days from your EOD database specify as in (a) but using both the **From:** and **To:** options.

(c) To remove a block of data from your Live database you must specify both the **To:** and **From:** limits and supply in addition the hours, minutes and seconds if necessary. If you leave hr, min, or sec blank then zeros will be assumed for these fields. This option is no longer used.

Generate list of all securities with alarms set

Whenever the **Check Data Integrity Option** is run a file **ALARMSET.LST** will be produced that contains all the stocks that have alarms set and lists these together with their current activating price if alarms have been hit. This file is accessed like any LST file by clicking the lightbulb button on the main toolbar and loading this file which is is available as a standard LST file like HILITE from the dropdown list box from the Enter Highlight File Name dialog box.

Deleting completely all alarms within Database

To do a mass removal of all alarms set in your database tick the option **Remove alarms from all securities** on the form before clicking **Start check**.

Chapter 8

Downloading Data

Overview

The Insight Trader **Datacapture** utility (**DATACAPT.EXE**) accessible from the **Utilities** menu, or from button 27 of the main toolbar, enables a series of individual Insight Trader data files to be automatically updated via an internet data service providing a single daily ASCII file.

In addition it can be used to import data from an ASCII file containing historical data for a single security only.

This utility is also used to update data files using the ASCII file produced by the **Bulk manual update** utility for rapid manual updating.

Updating can be done one day at a time or if the data service utilises a date systematic naming convention for its ASCII files then a very rapid procedure is available for importing hundreds of files in one go. This can reduce the average processing time from minutes per day to only a few seconds per day.

Datacapture can accept a very wide range of record formats and naming conventions for the ASCII files it is required to import.

Twenty two separate data services have already been customised in Datacapture to enable instant configuration but any data service may be used which can provide an update file in one of the many acceptable ASCII formats. In addition, the proprietary downloading software from these companies can optionally also be accessed directly from the **Utilities** menu provided you have entered the appropriate command line in the **Format/Preferences** configuration dialog.

The data presented to Datacapture must be in a general ASCII format. This is usually achieved through the software provided by the data service, which downloads a daily data file via internet from the host computer, and converts it to the ASCII file which can be read by the various charting/analysis programs to update their own data files.

Note that you do not need to initialise files manually. Datacapture does this automatically for you.

To provide consistency with most other users we suggest that you arrange with your data vendor that data is distributed so that share prices are expressed in cents rather than dollars and cents and volumes are in 100’s. However this is optional.

For most purposes it is only necessary to select one of the 22 preset dataservices and to check that the path settings suggested are correct. More detailed configuration is only required for specialised customisation.

Distributing Single Daily ASCII Files with Datacapture

Before you can use Datacapture you will need to configure it for the particular data provider that you are using.

After you have configured Datacapture you will be able to distribute daily ASCII files from your data vendor in either interactive mode using the Datacapture utility manually or automatically through the downloading software of the data vendor.

Express Configuration

An express configuration for any one of up to 30 preset data services will suffice in most cases.

Select **Datacapture** from the **Utilities** Menu and the WinIT Datacapture utility will be launched. Click the first toolbar button **Instant Configure** and you will be presented with a dialog as shown below.

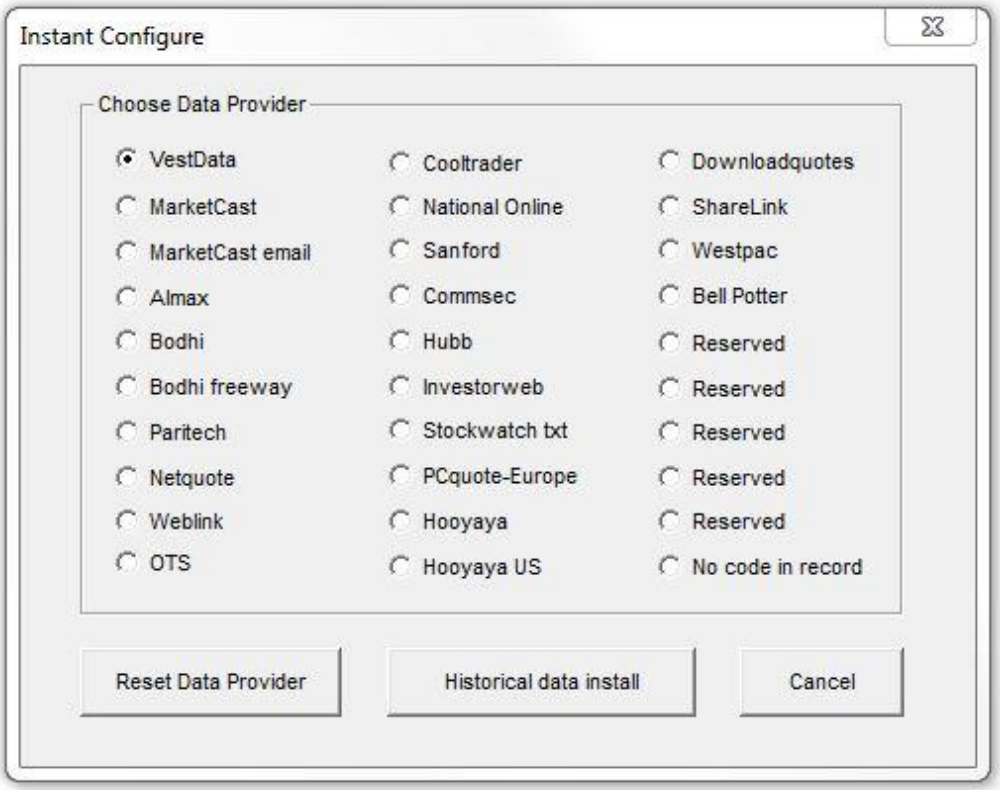


Fig 8.1

Data providers frequently change their service. Before entering any arrangement with a data provider or this list please confirm with them that they currently provide data suitable for Insight Trader.

Select the data service you require and press the **Reset Data Provider** button. Datacapture will now be configured for most services so long as any software from the data service has been installed in the standard directories on the same drive as the Insight Trader program.

You will then be asked if you wish to install historical data from CD and if so follow the on screen instructions. If you wish to install historical data from CD but do not wish to reset to the default settings for your data provider then click the **Historical data install** button instead.

To check that these default settings are correct select the second toolbar button **Custom configure** and another dialog will appear as follows.

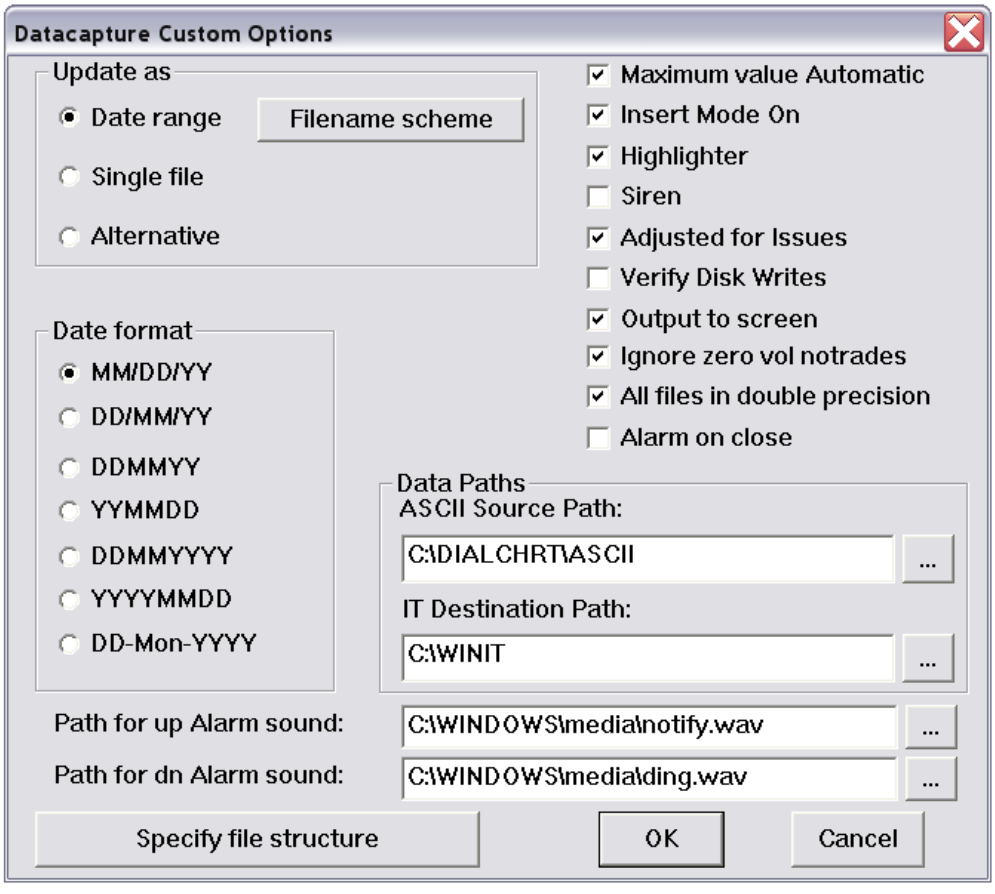


Fig 8.2

Check that the data paths are correct. The default paths shown should be correct in most cases. For example the ASCII source path should be the path specified by your data vendor for these files. If your data provider does not supply their own software and you are simply downloading a file from the internet manually then place these daily ASCII files into the

\WINIT\ENDOFDAY directory. The destination path should be the main Insight Trader directory to which you wish your data to be sent.

When specifying the Insight Trader destination path for data files only use the main IT directory eg \WINIT . Do not include any subdirectory off \WINIT such as DATA or A or B etc.

You are also given the opportunity to specify the paths and filenames of two "wave" files that will play a sounds for the siren whenever an up or down alarm is activated. There are usually a number of such wave files in the \WINDOWS\MEDIA directory which are more interesting than the default sounds that are used if you do not provide your own wave paths and filenames.

The check boxes on the right should be marked as shown with the **Verify disk writes** unchecked as this is only used for diagnostic purposes to determine whether the files written to disk can be read. If you wish to use the **Highlighter** and **Siren** facility as described below then these boxes should be checked also. If you want the alarms to activate on the closing price rather than the high and the low prices then check the box **Alarm on close**.

The other check boxes which should remain as shown control whether:

- the maximum value adjustment will be automatic
- an out of order entry will be inserted or ignored
- the dependent files adjusted for issues/splits are automatically updated.
- screen output is complete or suppressed for all but highlighted and stoploss alarm activated securities.
- dummy trades (with zero volume) transmitted by some data vendors will be ignored
- all files will be saved as double precision

If the **Insert mode** option in the options dialog is on it allows you to insert data prior to the last day in the Insight Trader data file. This is useful if you have accidentally missed out updating one or more days and then inadvertently added data for later dates. This can happen also if you attempt to update data in the wrong order. Without the INSERT option ON you are automatically prevented from updating these missed dates.

Highlighter

When updating large numbers of securities through the Datacapture it is possible to set a filter which will automatically flag exceptionally performing ones. Checking the **Highlighter** box in the dialog shown in Fig 8.2 will enable this facility. If switched on you will need to set the parameters you require. Click the third toolbar button **Highlighter** and the next dialog box will appear requesting you to set the options available.

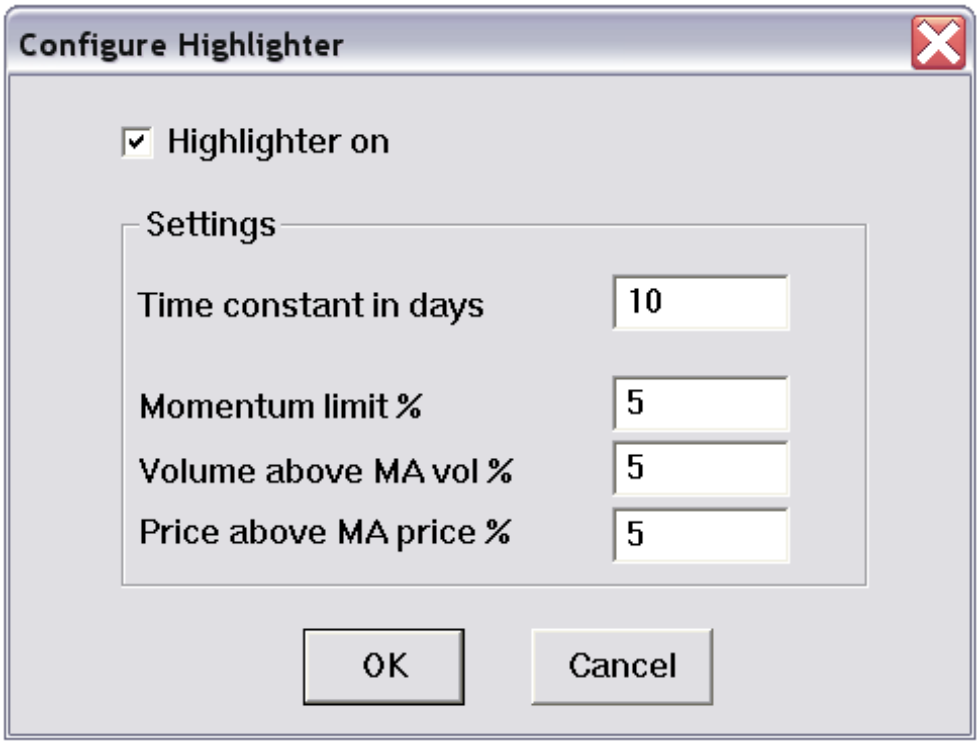


Fig 8.3

You first need to specify the period or **Time constant** over which the filter is to operate eg 10 days. The highlighter operates in such a way that there are three criteria that any security has to satisfy before it will be highlighted.

(a) Momentum (for the time period) has to be greater than the percentage limit you specify.

AND

(b) Volume has to be greater than the specified percentage above the moving average of the volume over the time period.

AND

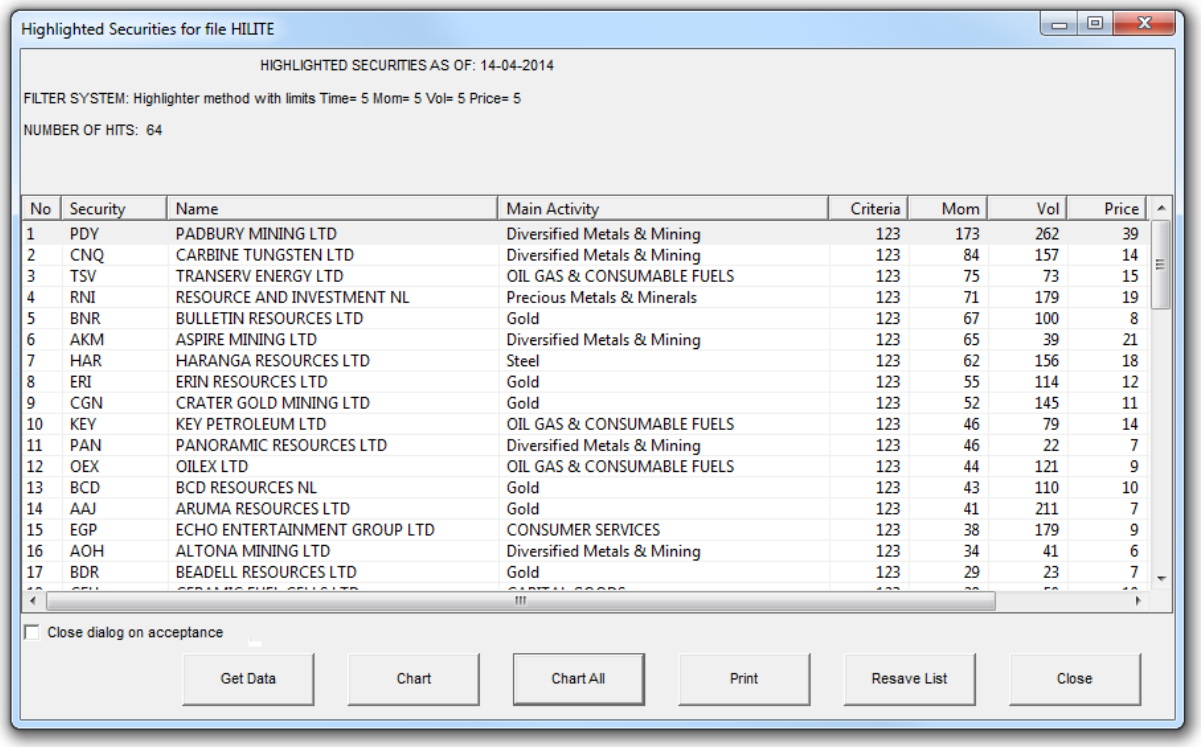
(c) The price has to be greater than the given percentage above the moving average of the price for the time period.

Set the values you want in the four edit boxes and ensure that the **Highlighter on** box is checked. Then press **OK** to accept.

The list of highlighted stocks so produced after Datacapture is run to update the files can be viewed by selecting **Highlight List** from the **File** menu in the main Insight Trader program and specifying HILITE as the file to view.

Any of the three criteria can be disabled by putting its percentage limit equal to zero. For example, if all the percentage limits are set to zero, all stocks will be highlighted.

The figure below is an example of a typical highlight list output from Datacapture.



No	Security	Name	Main Activity	Criteria	Mom	Vol	Price
1	PDY	PADBURY MINING LTD	Diversified Metals & Mining	123	173	262	39
2	CNQ	CARBINE TUNGSTEN LTD	Diversified Metals & Mining	123	84	157	14
3	TSV	TRANSERV ENERGY LTD	OIL GAS & CONSUMABLE FUELS	123	75	73	15
4	RNI	RESOURCE AND INVESTMENT NL	Precious Metals & Minerals	123	71	179	19
5	BNR	BULLETIN RESOURCES LTD	Gold	123	67	100	8
6	AKM	ASPIRE MINING LTD	Diversified Metals & Mining	123	65	39	21
7	HAR	HARANGA RESOURCES LTD	Steel	123	62	156	18
8	ERI	ERIN RESOURCES LTD	Gold	123	55	114	12
9	CGN	CRATER GOLD MINING LTD	Gold	123	52	145	11
10	KEY	KEY PETROLEUM LTD	OIL GAS & CONSUMABLE FUELS	123	46	79	14
11	PAN	PANORAMIC RESOURCES LTD	Diversified Metals & Mining	123	46	22	7
12	OEX	OILEX LTD	OIL GAS & CONSUMABLE FUELS	123	44	121	9
13	BCD	BCD RESOURCES NL	Gold	123	43	110	10
14	AAJ	ARUMA RESOURCES LTD	Gold	123	41	211	7
15	EGP	ECHO ENTERTAINMENT GROUP LTD	CONSUMER SERVICES	123	38	179	9
16	AOH	ALTONA MINING LTD	Diversified Metals & Mining	123	34	41	6
17	BDR	BEADELL RESOURCES LTD	Gold	123	29	23	7

Fig 8.4

Detailed Custom Configuration

The procedure outlined above will be suitable for most people who can skip this section and proceed immediately to **Running Datacapture for a Single Day**.

However, if you have subscribed to a data service other than those ten preconfigured above, or if you require advanced facilities, then you will need to customise the options in Datacapture in detail to enable it to operate with your source data.

Before proceeding, however, you will need to understand the general structure of the ASCII file required.

ASCII Format Required

This section is presented for technical reference only and may be skipped unless specialised information is required.

Datacapture can handle a wide range of ASCII formats such as follows:

1. HLCV

   eg. BHP 11/25/14 1080 1060 1075 17351

2. OHLCV

   eg. BHP 11/25/14 1065 1080 1060 1075 17351

3. OHLCVI

eg. BHPKA 11/25/14 125 140 115 135 1432 67210

4. OHLCVIT

eg. BHPKA 11/25/14 125 140 115 135 1432 67210 154000

Where:

OHLCVIT stands for Open High Low Close Volume (open)Interest Total-open-interest

Note however, that the file format is extremely flexible:

- the code name is optional
- the date can be in one of seven formats
- the OHLCVIT fields can be in any order
- the field delimiters can be a space, tab or comma or any of these three with any additional numbers of spaces or tabs.
- The internal date delimiters can be slashes "/" or hyphens "-" .
- there may be an extension field following the code (eg BHP, WMA, .., ..) to append to the code to construct a composite code for say the warrant BHPWMA. There may also be a field following the code or its extension providing the name of the security eg:

  WBC, Westpac Banking Corporation, .., .., …

- there may be one or more header fields in the file to ignore

New files are initialised automatically after Datacapture detects which of the above four formats is required.

In a single precision file all fields in Insight Trader format are represented by 2-byte integers with approx 5 digits of precision. The OHLC fields will be automatically setup for maximum values of a little over 3000.0 cents ie. $30 and can include decimals of 1 cent. The V and I fields will be automatically set up for maximum values of a little over 300. These values will not be large enough in many cases but will be automatically increased by the utility if necessary. Some data services provide the volume fields in hundreds of shares (ie. the volume divided by 100). Most services allow you to scale these fields and we suggest hundreds for ordinary shares on the ASX and prices in cents.

(The default maxima for all fields in all new files can be changed by altering the template files HLCV.DAT, OHLCV.DAT, OHLCVI.DAT and OHLCVIT, which are used for initialisation. Load each into the Insight Trader program, alter the maximum values on the Define File Specification form and resave the files.)

With double precision data it is generally unnecessary to alter the template files.

It is essential that data is updated in chronological sequence unless the insert mode is on. If files are updated with 25NOV14 data before 24NOV14 data with INSERT OFF, then the latter data will not be included.

The template files HLCV.DAT, OHLCV.DAT, OHLCVI.DAT and OHLCVIT.DAT, which are used for initialisation of new files, must be in the Insight Trader data subdirectory where the files to be updated will reside - ie DATA if the directory is not split (see below) or the H and O subdirectories respectively if it is split.

Please note that it is not necessary to initialise files manually. When Datacapture realises that a file does not exist for a new security it will automatically initialise one utilising the appropriate template file mentioned above.

Custom Configuring Datacapture

In addition to the configuration options discussed under Express Configuration above it is also possible to configure in detail the record structure of each line in the ASCII file. From the dialog shown in Fig 8.2 Click the **Specify file structure button** and the following dialog will appear.

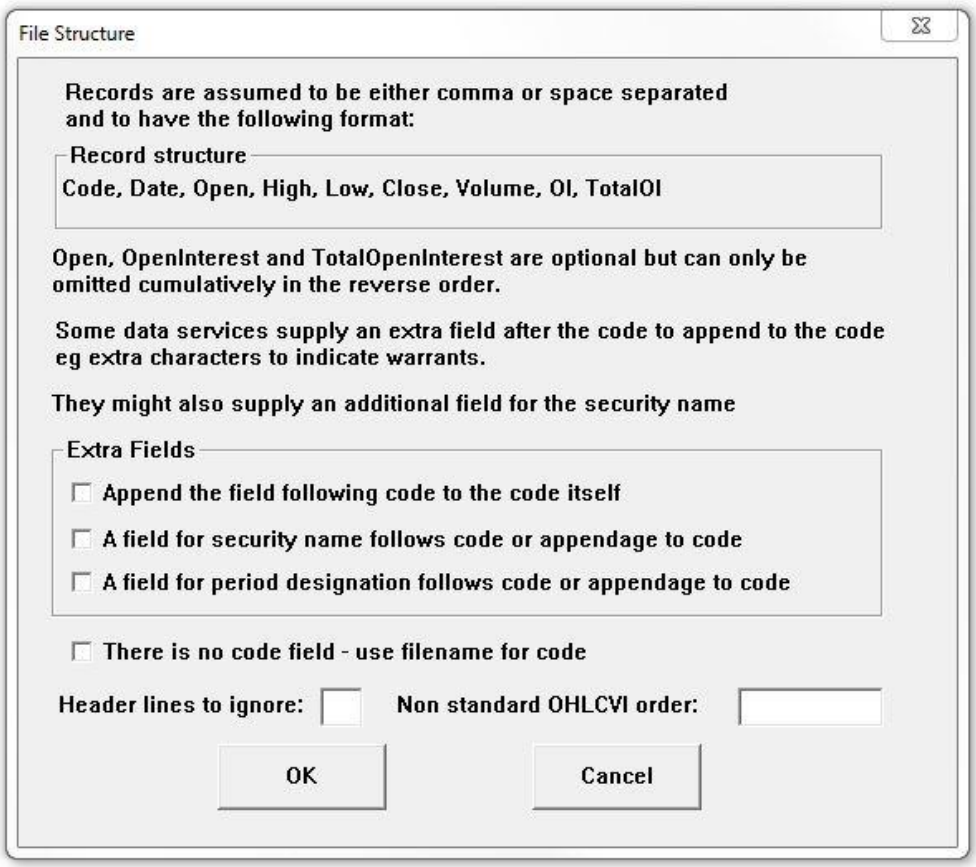

File Structure
Records are assumed to be either comma or space separated and to have the following format:
Record structure
Code, Date, Open, High, Low, Close, Volume, OI, TotalOI
Open, OpenInterest and TotalOpenInterest are optional but can only be omitted cumulatively in the reverse order.
Some data services supply an extra field after the code to append to the code eg extra characters to indicate warrants.
They might also supply an additional field for the security name
Extra Fields
Append the field following code to the code itself
A field for security name follows code or appendage to code
A field for period designation follows code or appendage to code
There is no code field - use filename for code
Header lines to ignore:
Non standard OHLCVI order:
OK
Cancel

Fig 8.5

If there are extra fields as discussed above check the appropriate boxes. If there is no code field in each record because the data all relates to a single security whose code is contained within the file name eg NAB.TXT then check that box.

If there is a line or two of data of say headings at the top of the file that you wish to ignore then enter the number of such header lines that should be skipped. If the fields are not in the normal OHLCVI order then enter the order in which they are presented in each record.

When these specifications have been completed press OK to save.

Running Datacapture for a Single Day

Now that you have configured Datacapture it can be run at any time - either automatically through the software of your data vendor calling this utility or you can run it yourself by selecting Datacapture from the Utilities menu.

To manually update click the fourth toolbar button **Go** which will present you with a dialog in which you should enter the **name** of the ASCII file to be distributed.

Distributing Many Daily ASCII Files with Datacapture

If you have many daily data files to distribute at one time you can do this extremely efficiently so long as these files are named according to a systematic date convention.

If you choose **Date range** rather than **Single file** on the Datacapture configuration dialog box then all the daily data files are first read and the data for all the dates and securities accumulated in memory. Then each Insight Trader security file is opened only once, all its new data inserted , and then closed only once. This can mean that the average processing time per day is only 10 to 15 seconds.

If you are not using one of the preconfigured data services then you will need to customise the convention used for the filename.

Select **Date range** rather than **Single file** and then click the **Filename scheme** button on the Custom configure dialog of Fig 8.2 when the dialog below will appear.

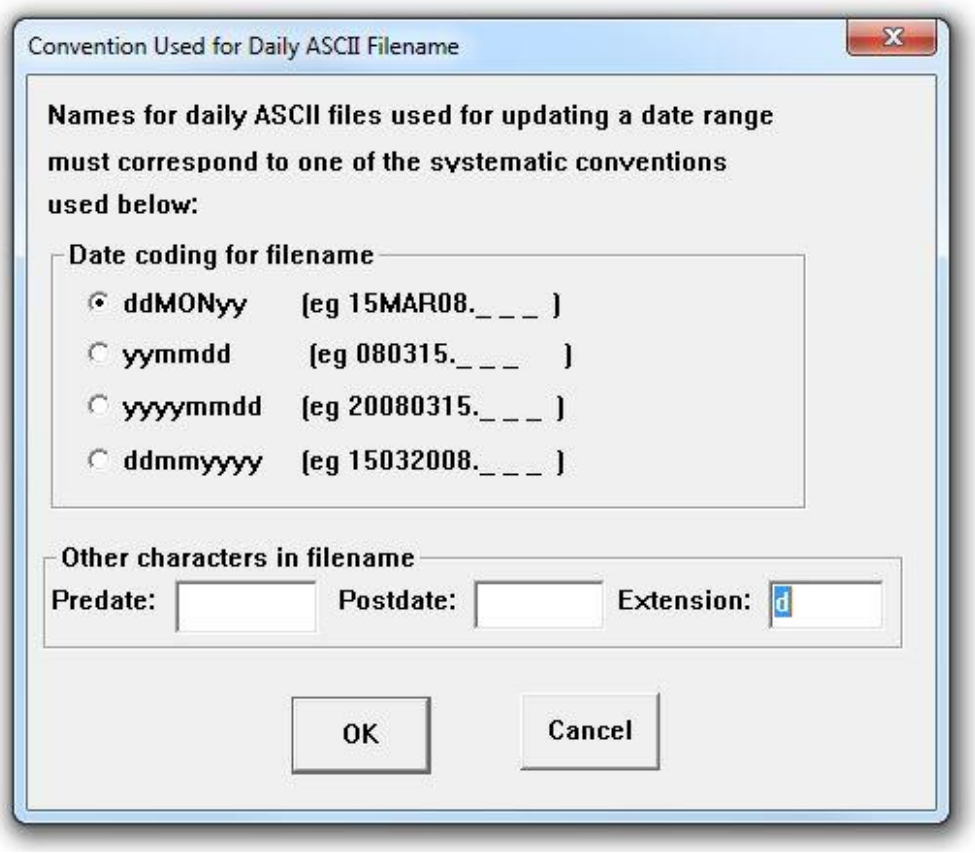

Convention Used for Daily ASCII Filename
Names for daily ASCII files used for updating a date range must correspond to one of the systematic conventions used below:
Date coding for filename
ddMONyy (eg 15MAR08._ _ _)
yymmdd (eg 080315._ _ _)
yyyymmdd (eg 20080315._ _ _)
ddmmyyyy (eg 15032008._ _ _)
Other characters in filename
Predate:
Postdate:
Extension:
OK
Cancel

Fig 8.6

Select the appropriate date coding scheme used in the filename and any characters used before or after this date should be entered in the **Predate** and **Postdate** boxes. The **Extension** to the filename should also be entered. Press OK to save.

Running Datacapture for Many Days

You can run Datacapture manually to update many days at once by selecting Datacapture from the Utilities menu.

From the **Custom configure** dialog Fig 8.2 select **Date range** rather than **Single file** then click the fourth toolbar button **Go** which will present you with a dialog in which you should enter the **Starting** and **Finishing dates** for the files to be distributed. The finishing date can be left blank allowing all data up to the current date to be processed.

If you are distributing an ASCII file containing data for more than one date ensure that it has a filename corresponding to the first date for any data in the file. For example, for a file containing data for the whole month of July 2001 the file should be named **02JUL11.D** or **010712.TXT** or whatever depending on the **Filename scheme** as specified in the Datacapture configuration. Furthermore the filename must correspond to a valid weekday otherwise it will be ignored.

Running Datacapture in Command Line Mode

After configuring Datacapture in interactive mode as described in the preceding sections for the source and destination paths and data service it can then be run in command line mode. This is how the software of the data services that call Datacapture automatically access this utility.

The general syntax of the command is as follows:

DATACAPT *ASCIIfilename* [*destination directory*]

The DATACAPT command is followed by the name of the ASCII file to be distributed and optionally by a destination directory which will override that specified in the configuration file.

The command line mode is especially useful for calling from other programs or from batch files.

An example of such a command where the configured destination directory is overridden by a second command line parameter:

DATACAPT 16AUG14.D \FUTURES

This will now override the destination path set in the configuration file by redirecting the output to the \FUTURES directory.

Should you wish to process all files from a given starting date up to the present (ie a date range) then you can use in place of the filename a date followed by an optional string of characters (that will become the predate) eg:

DATACAPT 160814AF \FUTURES

If the filename scheme has been specified as in Fig. 8.6 above then this command will process all files of the form

AF16AUG14.D

for the date 160898 up to the present, from the source directory specified in the configuration dialog of Datacapture into the destination directory \FUTURES.

Split Directories

There is an option to split each DATA directory into multiple directories based on the letters of the alphabet. Data files are placed in the subdirectory of the letter of the first character of the filename, eg BHP goes into directory \WINIT\B. This has been designed specifically for

the users who take the whole of the ASX market and who would otherwise have been operating with up to 10,000 files in the one DATA directory. Splitting the directory can lead to speed increases of 50-100% in operations such as downloading, loading data files from disk or the operation of the Database Manager. This is because the operating system only has to look through a list of a few hundred files rather than many thousand for the one it wants.

Apart from the speed increase, the operation of the program with a split directory will be transparent to the user who can still operate other directories as previously and these other directories can be split or not split. Insight Trader automatically detects whether a directory is split or not and accommodates it accordingly without the user being aware.

You can also use this facility to automatically distribute to their correct alphabetic subdirectories, into a directory already split, any number of new files which you may wish to include in your database. Simply place them into the \WINIT\DATA subdirectory and split the directory again. They will then be moved into their correct directories.

To split a directory carry out the following:

- Backup all your Insight Trader directories.
- If the directory contains less than 1000 files there is probably no point in splitting it.
- From the Insight Trader **Utilities** menu choose **Split data directory.** You will be presented with a dialog in which you should enter the name of the directory to split

eg. \WINIT or \FUTURES (DO NOT include the DATA subdirectory specification!)

- Then click the **Split directory** button and the progress will be displayed
- This will split the directory as required and transfer the files over from the existing DATA subdirectory.

When the utility has completed the process press Cancel to return to Insight Trader.

Whenever you wish to insert some new historical data into a currently split directory just place all the new data files into the \WINIT\DATA subdirectory and then run Split Data Directory. This will automatically move all the data files out into their correct alphabetic subdirectories.

Bulk Manual Update Utility

This utility is only used for very specialised applications and can be ignored by most users.

For updating large numbers of shares manually there is available a very efficient DOS utility accessible from the **Utilities** menu which allows a temporary ASCII file to be produced containing the prices for all securities of interest for one day. This file uses the same naming convention as the Almax data service for its files and uses the same structure. Eg. the file for Christmas day 2015 would be automatically named 25DEC15.D and would have the same structure. It can be distributed to the individual IT data files in exactly the same way as described above using Datacapture.

Setting up

Directories

Firstly create a directory off the \WINIT directory called ASCII to receive the files created by BULK.

The list file

Then set up a file named LIST.DAT (a sample is supplied with the program disks), using an ASCII editor or wordprocessor. This should list all shares/indices that you want to follow in the order in which they will be input (usually determined by the order in the newspaper).

Using the editor set out a list of ASX codes in the following manner

ANZ
BHP
CBA
DMP
ERA

etc

Then save this file as LIST.DAT in the WINIT directory.

If you are using very early versions of Windows with Notepad, Wordpad, Microsoft Word you should save it as a **Text** file and enclose the filename in quotes eg "LIST.DAT" to avoid having an unwanted .TXT appended automatically to give "LIST.DAT.TXT"

Configuring the utility

Select **Bulk manual update** from the **Utilities** menu and when the BULK menu appears set the **Path for ASCII destination files** to \WINIT\ASCII and the **Data type required** to HLCV or OHLCV etc depending on what format you wish the final file to have. BULK can handle a number of data types viz:

C CV HLCV OHLCV OHLCVIT

Entering the data

When you choose update to enter the information you will be automatically prompted for the next share and, in order, its (open) high, low, close and volume.

By entering numbers separated by + and/or - you can add/subtract in any field. Eg. volume may be obtained and accumulated from several exchanges. Just enter eg. 61000+32988+364 and these will be automatically added before being stored.

By pressing **F10** instead of **ENTER** you can duplicate the previously typed in entry.

There is the provision to skip any securities not traded on a particular day. If you hit ENTER for all fields of any record then that record will be ignored and not included in the ASCII file produced for updating.

With practice you can become very quick entering this data manually.

Distributing the ASCII file

When the file for the day has been completed the Datacapture utility DATACAPT.EXE should be configured and run as described above for the data services Vestdata and Almax. However, the **Maximum value Automatic** option on the **Datacapture options** dialog should be left unchecked to catch any typos you may have made. Also set the **ASCII source path** to \WINIT\ASCII and the **IT destination path** to \WINIT.

The information for the day will then be distributed to all the individual files when you chose to update.

If DATACAPT detects that the maximum value you specified needs to be increased as a result of a value that it has found it gives you the option to Increase the maximum value, Truncate it to the maximum value, Abort the updating process or to Modify the value manually.

This is particularly useful if that number was a typo because it gives you the opportunity to correct it during the DATACAPT process. Please note however that the correction is only in the IT data file. The ASCII file from which it is derived will still contain the original number which should be corrected later, most conveniently from the editor, when the process is finished.

Insight Trader ASX Database Manager

Insight Trader ASX Database Manager is an optional subscription service designed specifically for people who are downloading the whole of the market to allow then to keep their whole ASX database organised simply and easily by adjusting for company reconstructions, providing fundamental data and allowing you to analyse your data according to GICS industry sectors.

Data from your data service is transmitted to you via a series of three letter ASX codes, one for each company. For various reasons these **codes** may change from time to time. The **company name** can also change as can its **main activity** or GICS subsector. Sometimes the company may **split** its stock, make **rights** or **bonus issues**, **reconstruct** its capital and/or **return** portion of its **capital** or **premium**. These changes affect the share price so previous prices need to be adjusted to allow a valid comparison over time for charting analysis. A reconstruction can also lead to a suspension of trading of the primary ASX code which is temporarily replaced by another known as a **deferred delivery** share.

It can be a major chore to properly carry out the housekeeping manually on your ASX database, which can typically be 4,500 files in size. It is necessary to hunt down all the necessary information from various sources and insert it in the appropriate files, merging all the separate files together that need to be merged and removing from the database all the old files, that have been merged with new ones (typically about 450 files). After that, adjusted files needed to be generated for any securities that have been the subject of splits issues and reconstructions.

The Database Manager service does all this for you. It will:

- Insert the company name into each security file so that it will appear as a title in your charts.
- Insert the main activity of each company in the first line of the F2 notepad for that security.
- Insert any previous ASX codes for each company in the first line of the F2 notepad.
- Insert data for issues, splits, reconstructions, and capital and premium returns in the issues form of the file for each security so that the previous prices can be adjusted for these changes.
- Insert the fundamental information of Earnings Per Share, Dividend Per Share, Franking, Net Tangible Asset Backing, Shares on issue, Market Capitalisation and Debt to Equity to allow the derived information of Price Earnings Ratio, Dividend Yield and Price to Net Tangible Assets to be automatically calculated and displayed and searched for using the Systems Tester
- Flag the nearest forthcoming dividend exdate (where this is available) and this will appear in the F2 Notepad as Exdate/Dividend in Cents/Franking/Payment date. The chart will also show in the caption bar the first three of these. In addition a vertical bar (in the colour attributed to the open interest field) of a length equal to the dividend plus the imputed tax credit will drop from the top border of the chart and be positioned between the exdate and the previous day.
- Merge the appropriate files where the ASX codes have changed or where deferred delivery shares have temporarily replaced the normal shares. It can then move these old files , that have been merged with the current files, out of the working directory into a

new directory for later archiving. (If they are older than 6 months). This merging can be carried out as regularly as required to ensure all active deferred delivery securities are properly joined to the parent security.

- Automatically create "%" files adjusted for splits, issues, reconstructions.
- This database also interacts continuously with the normal operation of your Insight Trader program to allow you to load files by specifying part of the company name preceded by an apostrophe eg. 'WESTPAC or 'BROKEN to load WBC or BHP if you do not know the code.
- Automatically create reference lists consisting of all the companies in particular ASX GICS subsectors. These lists can then be used to autorun a slideshow of all the companies in the chosen subsectors, generate a chart arrangement of all these or used as reference lists for the Systems Tester filter operation.
- The highlight list and Portfolio Manager reports will include the code, company name & activity.

The Database Manager where installed can be accessed from the **Database Manager** option of the **Utilities** menu.

The Database Manager updates are usually transparently performed weekly (say every Tuesday - but can be done anytime) for the user simply by clicking on the menu item **Utilities/Update from web** option and the Web Updater utility will automatically update your database for adjustments and fundamental information. It will also refresh your Insight Trader software, if necessary, by updating your version to the latest release of that version.

The most recent standard notices that automatically appear during the Database Manager updating NOTICE1, NOTICE2 and NOTICE7 can all be accessed again directly at any time from under the Help submenu.

We also provide lists of the top 100, 200 and 500 stocks as ASX100db.LST, ASX200db.LST and ASX500db.LST, ASXSmallOrdsdb.LST, ASXSubindicesdb.LST, ASXSectorIndicesdb,LST as standard lists in the dropdown list box that appears when you attempt to select a list. This facility is only available for Database Manager subscribers and is updated weekly

User Supplied Fundamentals

Some users have a requirement for more extensive fundamental information than the basic measures provided by Database Manager. We have therefore enabled Insight Trader to optionally utilise additional fundamental information sourced by the user and presented to the program in the form of CSV files that are placed in the ....\WORKING\CSVFILES folder in the relevant database – usually WINIT\WORKING\CSVFILES.

This information can be displayed within the program - and in some cases be used to calculate additional fundamental values and used in searches.

This information may be sourced from broker's websites, other websites, other software, generated by the user or manually input by the user. Because the same fundamental measure may be calculated by different people in several different ways, the various sources may provide very different values for the same nominal quantity. Users now have the freedom to choose whatever source best suits their requirements.

This extended information is presented to Insight Trader by the user in the form of up to 6 CSV files that are dedicated to specific fundamental measures, up to 11 files that can override values or populate the vacant positions in the F2 notepad and up to a further 9 CSV files that are general in nature and able to display any information.

This facility is provided as a specialist functionality for those users requiring extended fundamentals and who are competent to obtain and utilise CSV files. You will find instructions for implementing this feature under "Help/User supplied fundamentals". Contact us for further instructions for sourcing information from specific broker websites or third party computer programs.

Updating Insight Trader from the Web

By clicking on the Spiderweb button on the main toolbar or accessing **Utilities/Update from web** from the main menu you can easily keep your version of Insight Trader continually refreshed with the latest changes in that version and at the same time update your ASX database for the latest adjustments and fundamental information as described above. The Web Updater utility automatically knows what has to be downloaded to bring you up to date and it even automatically updates itself from time to time.

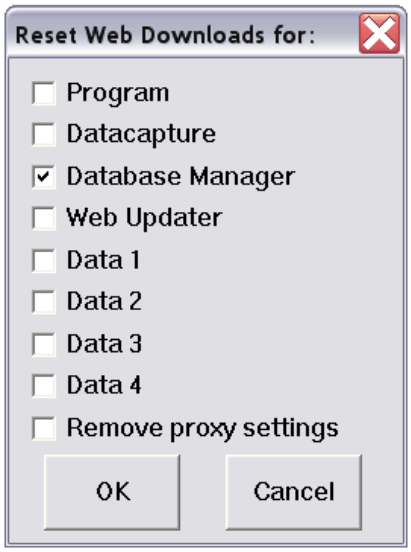


Fig 8.7

Should you wish to download again any component that you have already downloaded (eg because of a problem in communications) then you should first choose **Utilities/Reset downloads**. The dialog box above will appear and you should check off those components you wish to redownload. Note that the items Data 1 to Data 4 are reserved for future use.

The Web Updater also performs the function of automatically completing the process of final registration of your program.

The Spiderweb Toolbar Button

The Spiderweb toolbar button 28 on the main toolbar that accesses the webupdater can be used with the Shft, Ctrl and Alt keys to perform certain specialised tasks as follows:

Alone - Downloads anything that needs downloading (as before)
Alt - Reprocesses the already downloaded Database Manager
Shft - Forces a re-download of the latest Database Manager
Ctrl - Forces a download of the latest Program files.

Only use Ctrl with the Spiderweb button if you are happy to trial the latest update to the program as we often upload beta versions for our beta testers to trial the changes before release to the general public. Updates released to the general user base will come down automatically when you click the Spiderweb alone. Clicking this every week will keep your program and Database Manager up to date.

Chapter 9

Systems

Overview

The Systems Tester is an optional module in Insight Trader. It allows you to set up mechanical trading rules consisting of sets of combined technical and fundamental criteria that must be satisfied for certain actions to be triggered. Each set of criteria (or system) is arranged in two sections - the Buy Alert and the Sell Alert criteria. The resulting system is then used in either one of two distinct modes:

- As a filter to enable you to trawl your whole database to identify those securities satisfying the criteria that you have specified.
- As a profitability tester to enable you to calculate the profit you would have made had you traded a particular security over historical time according to your rules.

In filter mode you specify a reference list of securities that you want investigated (maybe the whole market) and the systems tester will construct a highlight list of all those securities satisfying the criteria on either the buy side or the sell side.

This list will display, for each security, certain standard technical and fundamental values like momentum and dividend yield. The list can be ordered according to this information as well as alphabetically. The list can be printed out, used as a highlight list for an autorun or it can be used as a reference list for another systems filter.

In profitability tester mode it will create a report of all the trades it has made listing costs, brokerage, profits and a comparison with a simple buy and hold strategy. In addition it creates two event files - one containing the buy events and the other the sell events. These are overlaid on your charts to reveal the dates on which your hypothetical trades were made.

Constructing a System

Structure of a System

A system is composed of a set of up to 16 criteria, each of which specifies a condition that must be satisfied. These conditions are constructed using the important quantities of price and volume that are the basis of your charts. They can also involve functions derived from the various indicators as well as fundamental quantities such as dividend yield. There are in addition a number of specialised functions particular to the systems tester.

The values of these functions can be multiplied, divided, added or subtracted before being subjected to various logical tests to create a criterion. Up to 8 of these criteria are linked

together by AND and OR relationships to produce the Buy alert and Sell alert sets which constitute the overall system.

Syntax of the Criteria

Each criterion is presented in an easily understandable way in the form of an expression such as:

RSI(14,D) :>: 70

This means that if the 14 day RSI is above 70 then this criterion will be satisfied. Multiplication, division, addition and subtraction can also be used:

H(W) :<=: 1.05 * MC(15,W)

This criterion will be satisfied for any security where the weekly high is equal to or below the 5% envelope above the 15 week moving average of the close.

Each expression contains the following three elements:

(i) A logical (or relational) operator enclosed between colons such as :>=: (1 only)

(ii) Functions such as RSI(14,D) or constants such as 70

(iii) Arithmetic operators + - * / between functions

There can be up to 2 functions on either side of each expression.

Where there are 2 functions on any side they are joined by */+ or -.

In addition each function can have up to 4 parameters with the final parameter specifying whether daily D, weekly W or monthly M.

(For the interest only of those users who are familiar with the normal computer nomenclature is shown below the general structure of each expression:

Func() [ArithOp Func()] :RelOp: [Func() [ArithOp Func()]]

The minimum allowed is:

Func() :RelOp:)

Functions

The following is a list of available functions. The parameters required are given in brackets after the function where ***n*** values represent numbers that, for the indicator functions, are input in the same order as they are for charting purposes. The final parameter that is indicated by ***D***, which is sometimes the only parameter, is set at D for daily, W for weekly or M for monthly. For example the weekly default MACD is expressed as:

MACD(26,12,9,W)

just as you would input the parameters for charting purposes.

An "ago" facility is available to calculate previous values eg MC(10, D-7).

This function will return the 10 day moving average of the closing price, seven days before the target date. Just place minus the number of periods after the D, W or M parameter in the relevant function eg MACD(26,12,9,M-3).

The Basic Functions

These functions reflect the basic price and volume quantities and only require the time period parameter

Basic Functions

Function	**Name**
O(*D*)	Opening price
H(*D*)	High price
L(*D*)	Low price
C(*D*)	Closing price
V(*D*)	Volume

Candle Functions

These functions provide the sizes of various basic components of candles

Candle Functions

Function	Name
BODY(*D*)	Candle Body Size (Close - Open)
ABODY(*D*)	Absolute Value of Candle Body Size
RANGE(*D*)	Range (High - Low)
TSHAD(*D*)	Top Shadow
BSHAD(*D*)	Bottom Shadow
HMO(*D*)	High Minus Open
HMC(*D*)	High Minus Close
OML(*D*)	Open Minus Low
CML(*D*)	Close Minus Low

Main Chart Indicator-based Functions

These functions are based on the indicators that are displayed in the main chart and described in the chapter on Indicators and the n_1, n_2 and n_3 parameters represent the same parameters in the same order as described in Chapter 3 for charting purposes.

Main Chart Indicator-based Functions

Function	Name
MO(n_1,*D*)	Moving Average of the open
MH(n_1,*D*)	Moving Average of the high
ML(n_1,*D*)	Moving Average of the low
MC(n_1,*D*)	Moving Average of the close
MV(n_1,*D*)	Moving Average of the Volume
PAR(n_1,n_2,n_3,*D*)	Parabolic Stop and Reverse
BOLL(n_1,n_2,*D*)	Bollinger band size
LLR(n_1,n_2,n_3,*D*)	Line of Linear Regression

The Line of Linear Regression needs the following explanation

n_1 = period
n_2 = is the % or no of ATRs displacement for any lower band
n_3 = is the % or no of ATRs displacement for any upper band

If n_2=0 and n_3 = 0 the return value is the central "cord"

If n_2<>0 and n_3 = 0 the return value is the lower band
If n_2 = 0 and n_3<>0 the return value is the upper band

Specify n_2 or n_3 as negative to get an ATR rather than % band

Sub Chart Indicator-based Functions

Function	Name
MAOS(n_1,n_2,D)	Moving Average Oscillator
RSI(n_1,D)	Relative Strength Index
STO(n_1,D)	Stochastic
SSTO(n_1,D)	Slow stochastic
MACD(n_1,n_2,n_3,D)	Moving Average Convergence Divergence
MOM(n_1,D)	Momentum
DETR(n_1,D)	Detrend
ADX(n_1,D)	Directional Movement Indicator ADX
ADXR(n_1,D)	Directional Movement Indicator ADXR
PDI(n_1,D)	Directional Movement Indicator +DI
MDI(n_1,D)	Directional Movement Indicator –DI
ATR(n_1,n_2,D)	Average True Range
ROR(n_1,n_2,D)	Rate of Return
MFLOW(n_1,D)	Money Flow
MFI(n_1,D)	Money Flow Index
BULLP(n_1,D)	Bull Power
BEARP(n_1,D)	Bear Power
FORCE(n_1,D)	Force Index
WILLR(n_1,D)	Williams %R
PCBOLL(n_1,n_2,D)	Bollinger %b
TREND(n_1,n_2,D)	Trend
LRGR(n_1,D)	LRGR
SROC(n_1,n_2,D)	Smoothed Rate of Change
VELOCY(D)	Velocity
BEHAVR(D)	Behaviour

All the above are directly analogous to their indicators and the reader is referred to Chapter 3 on indicators. For example, RSI(7,D) is the 7 day RSI where $n_1 = 7$.

Special Functions

A number of functions have been designed especially for the systems tester to provide measures for market behaviour not available otherwise.

Special Functions

Function	Name
MAX(n_1,D)	Maximum
MIN(n_1,D)	Minimum
RUNS(D)	Runs
BHG(n_1,D)	Breakhigh
BLW(n_1,D)	Breaklow
ACTVTY(n_1,D)	Activity
Constants	Constants

The **Maximum** function returns the maximum price that occurred in the previous number of periods. For example MAX(7, D) is the maximum price seen in the last 7 days. If the history available in the file is less than the number of days specified the test will be considered to have failed. However, if the number of days is entered as a negative value, eg MAX(-260, D), and if the total number of days in the file is less the specified figure, the function will return the maximum value in the data available ie the all time maximum up to that point.

The **Minimum** function is analogous so that MIN(15,W) would be the minimum price seen in the last 15 weeks. However, if the number of weeks is entered as a negative value, eg MAX(-52, W), and if the total number of weeks in the file is less the specified figure, the function will return the minimum value in the data available ie the all time minimum up to that point.

Activity function returns a value between 0 and 1 depending on the proportion of trading days that have seen a trade. The argument n is the number of four week blocks over which to calculate the value of the function. If there are no trades in the period then ACTVTY = 0

If there has been a trade for every weekday ACTVTY = 1.

If there have been trades on half the days ACTVTY = 0.5

Holidays are counted as a missed trade and the value returned will be less than 1. Only use a compression of D

In order to determine when a significant peak has been broken we have introduced the **Breakhigh** function. It is based on the concept that if we had said yesterday that we had not seen prices so high for three months (t_1) but today we can say that we have not seen prices so high for a year (t_2) the probability is that today we have just broken a peak that occurred three months ago. The Breakhigh function will return the value of t_1 (ie three months) so long as there has been a significant increase between yesterday and today in the time for which we have not seen prices so high. Otherwise it returns zero.

The first parameter required by this function is a threshold parameter which sets a limit to the significance of the breakout. If t_2/t_1 is greater than this threshold then Breakhigh will return t_1 otherwise it returns zero. By default this parameter is set to 1.5 so that we need to see at least a 50% increase.

If a non zero value is returned by Breakhigh then we need to check that we are not just breaking a recent temporary high of say two days ago so we check our value of Breakhigh against some other limit in our system criterion. We might for example require that the high that is broken is at least one month ago and would therefore set our criterion as:

BHG(1.5,D):>:30

To define this function more rigorously BHG(1.5,D) returns the number of calendar days from today that the previous trade's high price was last equalled or exceeded (provided the value of the ratio defined below equalled or exceeded the value of the threshold 1.5 given by the first parameter in the function otherwise it returns zero). This ratio is:

$$\frac{\text{number of calendar days since today's high was last equalled or exceeded}}{\text{no of calendar days from today since the previous trade's high was equalled or exceeded}}$$

The significance of a threshold of 1.5 means that we can now see over the top of the last peak a "distance" of 50% more than we could before. The value returned by the function is approximately the number of calendar days ago of the position of the peak that has just been broken.

Breaklow BLW() is defined in an analogous way to Breakhigh except that we are dealing with troughs instead of peaks.

The **Runs** function returns the current number of consecutive rises (or falls), in an unbroken run of rises (or falls), that a security has experienced. If RUNS(D) is positive it gives the current number of consecutive daily ups or if negative the number of consecutive daily downs.

Fundamental Functions

It is possible to insert into the F2 notepad of your security files the latest fundamental information of DPS, EPS, NAB and Franking. This is done regularly and automatically for subscribers to the Database Manager service but can also be performed manually. Corresponding fundamental functions providing this information are also available in the system tester. The last five are available if your data provider supplies the raw information or

if you are importing data inthe form of CSV files as described in the section on “User Supplied Fundamental Data”.

Fundamental Functions

Function		Name
DIVYD(*D*)	-	Dividend Yield
EYLD(*D*)	-	Earnings Yield
NTAYLD(*D*)	-	NTA Yield (NTA/Price)
PER(*D*)	-	Price Earnings Ratio
PNAB(*D*)	-	Price to Net Asset Backing ratio
FRNK(*D*)	-	Franking (0 - none, 50 partial, 100 full)
TMSC(*D*)	-	Times covered
PRFI(*D*)	-	Composite performance index
MKCAP(*D*)	-	Market Capitalisation
DER(*D*)	-	Debt to Equity ratio
DAR(*D*)	-	Debt to Assets ratio
PSR(*D*)	-	Profit to Sales ratio (Operating Margin)
ROE(D)	-	Return on Equity
ROA(D)	-	Return on Assets
BTA(*D*)	-	Beta

All of the above functions are self explanatory except for the composite performance index which is calculated according to the following ratio

$$\text{PRFI(D)} = \frac{\text{DIVYD}}{\text{PER} \times \text{PNAB}}$$

Note that % values for Dividend yield, Earnings yield and NTA yield values are entered as decimals.

eg DIVYD(D):>:0.05 will allow you to filter out of your directory those securities with a Dividend Yield greater than 5%.

NB These fundamental functions should be used on recent data only as the values for the underlying fundamental information are for the most recent reports. Therefore they should be used for filtering on recent dates rather than for profitability testing.

Filter Reports and printed highlight lists contain values for selected fundamental functions from the list for each security where this is available provided the Database Manager is installed or the requisite information has been entered via CSV files as explained elsewhere under "User Supplied Fundamental Data".

Arithmetic Operators

One arithmetic operator joining two functions can appear on each side of the logical expression for a single criterion. The following is a list of the arithmetic operators that can be used.

Arithmetic Operators

+	plus
-	minus
*	multiplication
/	division

Logical Operators

You can have one logical operator separating the two sides of any expression. These logical operators must be delimited by a colon at the beginning and end. These colons must not be omitted.

LOGICAL OPERATORS

:=:	equals
:>:	greater than
:<:	less than
:>=:	greater than or equals
:<=:	less than or equals
:^:	penetrate up
:Y:	penetrate down
:X^:	crosses up
:XY:	crosses down

In addition to the greater than, less than, equals operators which are self explanatory we have four other operators that let us know if one value is greater than another but only if it has just happened.

The **penetration** operators :^: and :Y: indicate penetration of one value by another. These specify whether one function has just penetrated another up or down respectively.

For indicators that have trigger lines . (ie MACD, STO, SSTO and ADX) the **crossover** operators :X^: and :XY: test whether the indicators have just crossed up or down over their trigger lines.

The Total System

We have examined the functions that are available, the arithmetic operators that we can use, the logical operators that separate each side of the expressions that constitute the criteria that we set using the necessary syntax. Having constructed each of these criteria we now need to assemble them into a system that we can use to run a filter or profitability test.

A system constitutes two sets of criteria - the Buy Alert and the Sell Alert. Each set can consist of up to 8 expressions (representing 8 criteria) which are joined by a logical AND or OR. An example of what you might see on one side of a system is as follows:

RSI(7,D):Y:70	The 7 day RSI penetrated 70 down
OR	or
MACD(26,12,9,D):XY:	The daily MACD has crossed down
OR	or
MC(30,D):>:MC(60,D)	The 30 d MA is above the 60 d MA
AND	and
C(D):<:M(60,D)	The price closed below 60 day MA

In constructing your sets of criteria remember that logically the AND's are calculated before the OR's. (ie we say AND has greater precedence than OR.)

Because you need to specify two sets of such criteria - The BUY ALERT set and the SELL ALERT set - in total you may specify up to 16 expressions for any one system. For certain filtering operations you may only be interested in one side of the system, say the Buy Alert side and you can therefore leave the other side empty and it will never be satisfied. For profitability testing it is essential that both sides of the system contain triggerable criteria.

Using a System

Before we can use our system we need to set it up on the computer as we have designed it. There are three ways we can do this:

- By creating a new system from scratch
- By loading an existing system
- By editing an existing system

Setting up the System

Fortunately Insight Trader comes with an existing library of about 80 systems already configured and it is most likely that you will be able to use one of these directly for most purposes. If not there is every likelihood that you will be able to modify an existing one without difficulty. Otherwise you can construct a system from the ground up as it is not at all difficult to do. We will first learn how to create a new system.

Create New System

From the **Systems** menu choose the **New system** option and you will be presented with the following dialog box.

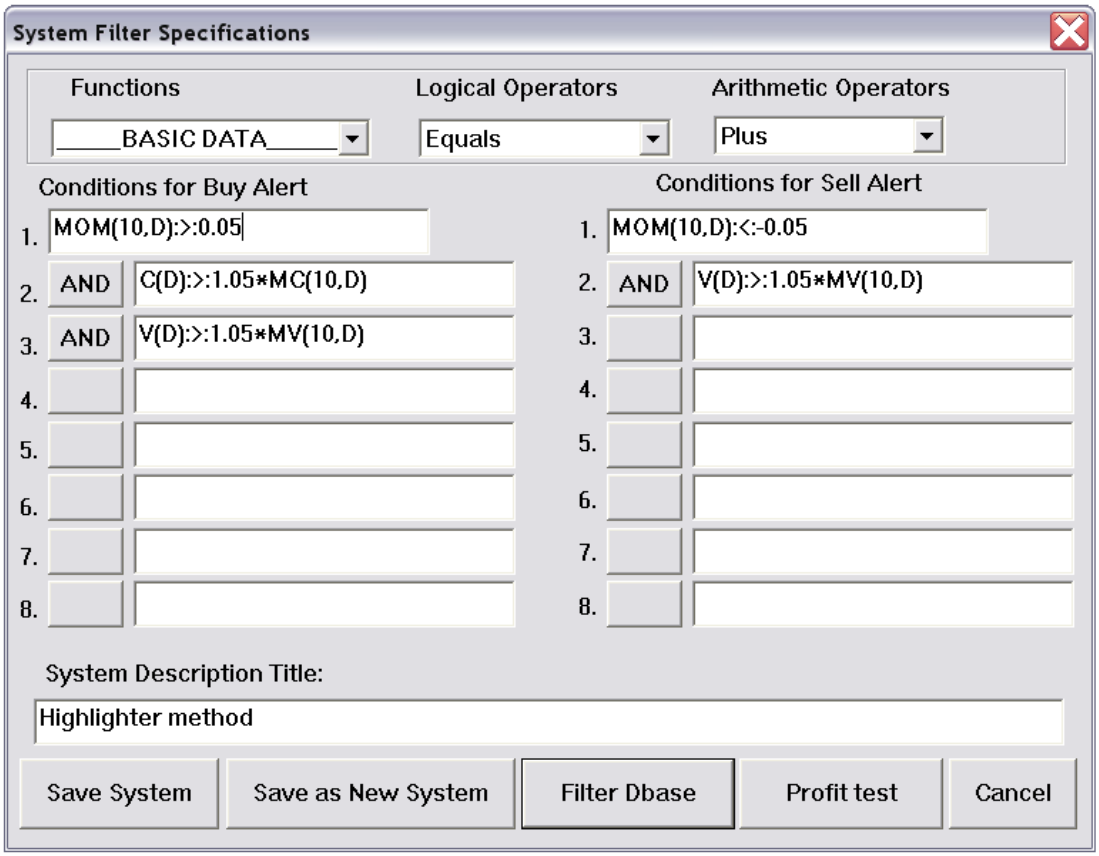


Fig 9.1

On the left hand side you will see provision to enter up to 8 expressions defining your **Conditions for Buy Alert**. On the left of 7 of these eight edit boxes are buttons which, if pressed when there is a valid expression in the previous edit box, will cycle between AND and OR. So you can enter the first expression in the first edit box and then press the button on the left of edit box 2 until it shows either AND or OR depending on what you require.

There is a corresponding set of boxes and buttons for defining your **Conditions for Sell Alert**.

The three dropdown list boxes at the top of the dialog box can allow you to automatically place into the active expression any functions and operators displayed in the lists there. This saves you remembering the exact tokens for these components. After dropping these tokens into the expressions simply fill in the required parameters in the empty parentheses. Using these drop down list boxes facilitates the building of system criteria and reduces the probability of error.

Keep entering expressions until you have all the criteria for your Buy Alert. Do the same for the Sell Alert side and when you have finished and checked that the expressions are correct then type a descriptive name for your system in the **System description title** edit box below.

Then click the **Save as new system** button to save your system to disk and click **Cancel** to exit.

You can save up to 1000 systems in this way for later recall and use at any time. These saved systems may be accessed from the system menu and can be selected from a list in a similar way to saved charts. We will now try to recall our system from disk.

Load System

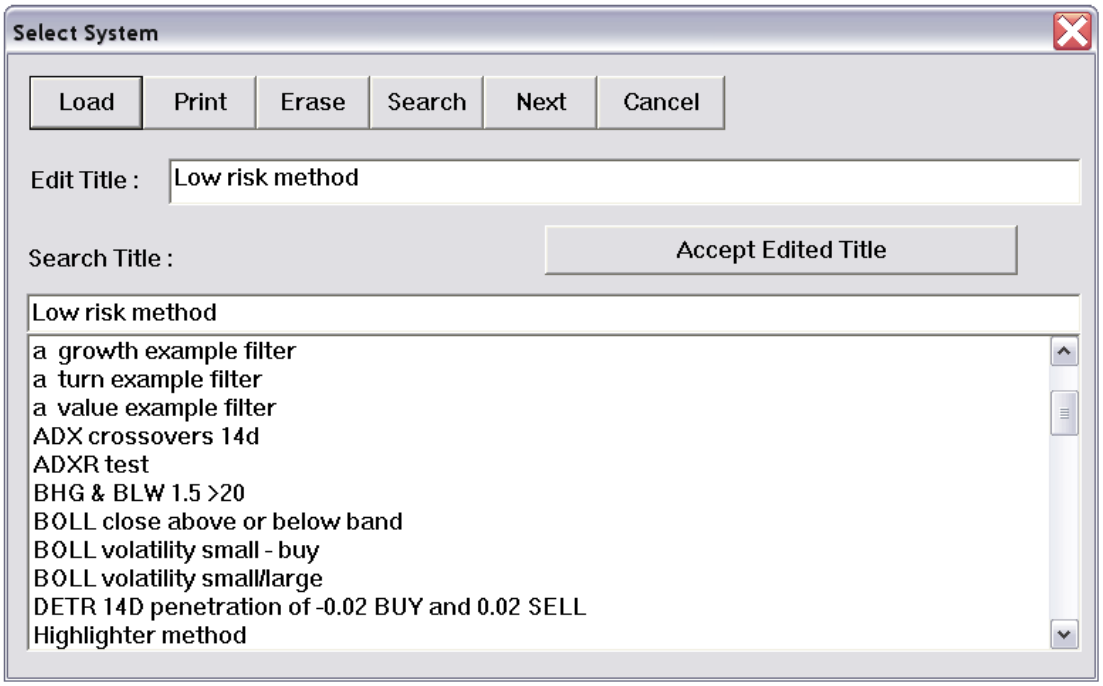


Fig 9.2

Choose **Load system** from the **Systems** menu or click button 14 **Load system** from the main toolbar or use the speedkey **Alt Y** to load an existing system from disk. The following dialog box will appear displaying a number of predefined systems and any that you may have saved yourself. The buttons and boxes on this dialog box operate in an analogous way to those on the dialog box for loading chart arrangements from disk. This dialog has fewer buttons because we only have one category for saved systems rather than 10 as for charts.

Select and **Load** the system of your choice. This dialog box will now be replaced by the **Systems filter specifications** dialog box that we used above to create our system but it will contain all the criteria of the chosen system. This will now be discussed.

Edit System

If a system is already currently loaded into memory then it may be edited by choosing **Edit system** from the **Systems** menu. Otherwise it is accessed indirectly as described under Load System above. The **Systems filter specifications** dialog box appears and the system may be edited to your requirements and saved to replace the original (**Save system**) or we can save it as a totally new system (**Save as new system**) leaving the original one intact.

From this dialog box we can also directly filter our directory (with the **Filter Dbase** button) or perform a profitability test (**Profit test**).

Filtering your Database

To filter your database you will need to :

1. Select an existing (or create a new) Reference List of securities to filter. To create such a list manually, or automatically according to the standard ASX GICS subsectors, refer to **Manually Generated Reference Lists** or **Generate Highlight List from ASX Subsectors** in the **Autorun Reference or Highlight Lists** in Chapter 5. The structure required for reference lists used for both filtering and for autorunning are identical.

2. Select an existing (or create a new) System of filter criteria that need to be satisfied.

3. Decide on a Target date for the test to be applied

4. Decide on how many days back you wish to examine each security (ie the Notrades Limit) to ascertain the last trade. If the security has not traded within the Notrades Limit then it is ignored during the filtering process.

5. Filter the directory

Set the Reference List

By selecting **Reference list set** from the **Systems** menu a dialog box will allow you to type in a reference list name or search your directories for a suitable reference list from which the security codes to be searched will be taken. If you wish to save this as the default list to appear each time you access your systems filter then choose **Configuration save** from the **Systems** menu to save it.

Filter the Directory

If you already have a system loaded then you can go straight to **Filter directory** from the **Systems** menu. Alternatively, if you have chosen the **Load system, Edit system** or **New system** options you will eventually enter the **Systems filter specifications** dialog box, shown in Fig 9.1 which has a button **Filter Dbase** allowing you to directly enter the **Systems filter** dialog box which appears below. You will have to enter information into three boxes. Browse buttons are provided for the first two.

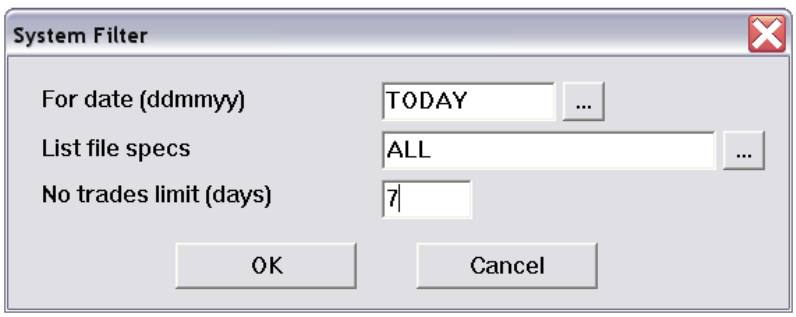


Fig 9.3

The first entry is for the target date ie the date for which you wish the tests to be carried out The **For date** is the date for which you wish to perform the filtering. The default is TODAY. If a security has not traded on that date then the analysis will be performed for the last date traded before that date so long as it is within the **Notrades** limit. Therefore in the third box enter the number of calendar days that you wish the filter to look back for the last trade before the analysis for that security is abandoned.

You also need to enter a file specification (ie filename and path) to **Listfile Specs** for an ASCII file containing a list of securities for which you wish to perform the filtering. This can be:

(a) a reference list constructed as described in Chapter 5 using the **Generate Ref List from Sectors** option from the **File** menu. Such lists may consist of all companies in particular ASX subsector or the whole market itself. For example you would use this method if you wished to run a filter just on all the gold companies on the board.

(b) the output highlight list of a previous filtering run

(c) a daily ASCII download file such as the \DIALCHRT\ASCII\25DEC15.D for Vestdata users

(d) any ASCII file that the user may wish to construct, which contains a list of the required ASX codes. For example, you could have several watch lists or a list of all the codes making up the All Ordinaries Index etc. The files should be structured in the same way as are lists created for autorunning (refer to the relevant section for details). These are structured so that the codes occur one under the other after an initial header line:

"300614", "My Watch List"

ANZ

BHP

RIO ... etc

There can be other information on each line provided it is separated from the code by either a space or a comma as in the Vestdata daily ASCII download files mentioned above. Such list files can be constructed using a text editor or wordprocessor and saving the file as an ASCII or text file.

While the filtering process is underway a window will display an upper line showing the code of the security currently being analysed and a lower line displaying the last code which satisfied the set of criteria together with a string of numbers indicating which of the criteria 1-8 of the set has been satisfied. A plus refers to the Buy Alert criteria and a minus to the Sell Alert criteria eg.:

+12 4 7 indicates buy conditions 1,2,4 and 7 have been satisfied.

- 345 indicates sell conditions 3,4 and 5 have been satisfied.

If both Buy and Sell Alert criteria have been activated then only the Buy Alert signal will be considered valid.

View the Report

When the filtering is complete, a report will appear presenting the securities highlighted including their rank, their codes, their names, their main activities together with the number strings specifying the criteria met. Also shown are the momentum, the percentage by which the volume is above the 10 day moving average of the volume and the percentage by which the price is above the 10 day moving average of the price. Then come the two global indicators of Velocity (on which the list is ordered) and Behaviour. In addition to these technical quantities there will also be shown (where the information is available) the MarketCap, MoneyFlow, Debt to Equity, PE ratio, Earnings Yield, Dividend yield, Franking, Gross Dividend Yield and P/NTA.

In the case where you have imported User Supplied Fundamentals in the form of CSV files there will be the additional columns for Return on Equity, Return on Assets, Return on Capital, Earnings per share Growth, Earnings Stability, PEG Ratio and a spare column. After this there are two columns for display only for items of your choice.

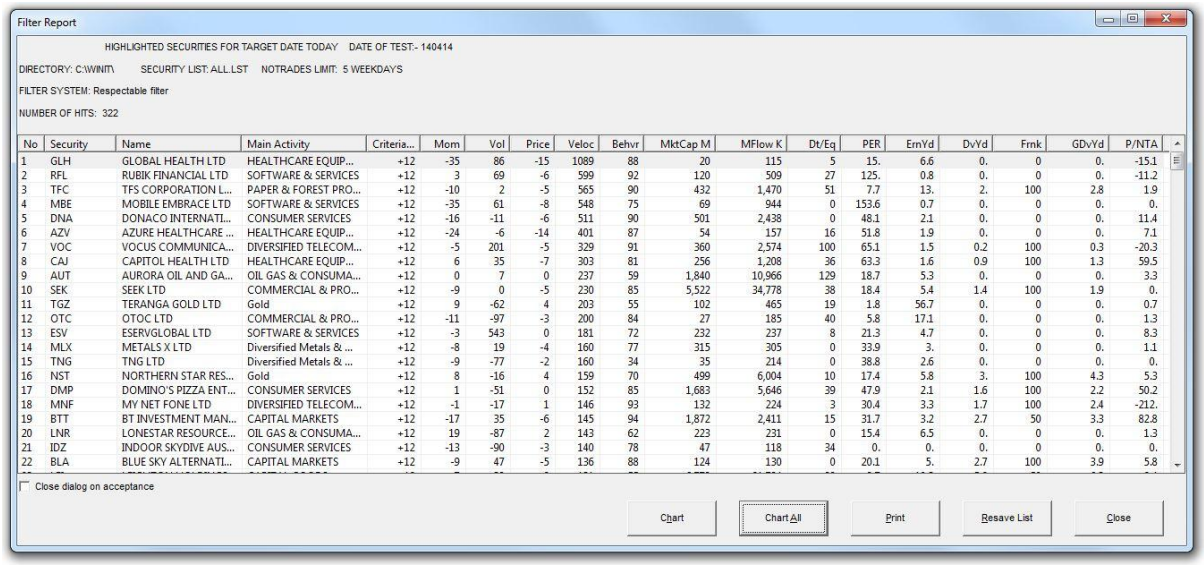


Fig 9.4a

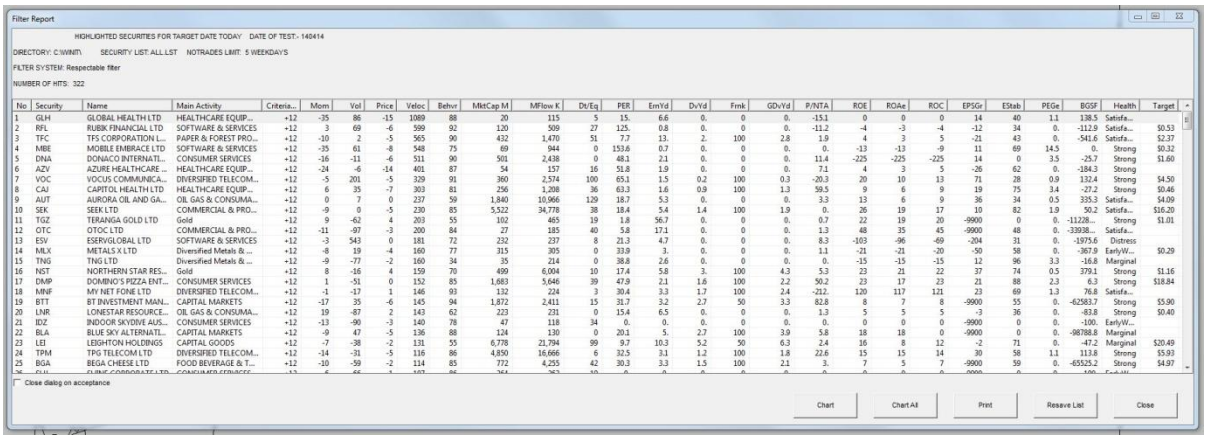


Fig 9.4b

Double clicking any security on the list will chart it. Selecting any security, range of securities or several individual securities and pressing the **Chart** button will create a chart of each one selected. Pressing the **Chart all** button will throw up a chart of every security on the list on the screen at the same time.

You can sort the filter list on any column as described below by clicking the column header. The report can be printed by clicking the **Print** button on the dialog box. Pressing the **Resave list** button will resave it to disk as sorted in its current order.

The **Close dialog on acceptance** check box is ticked by default so it will close after charting any selection. If you wish it to stay open to add more charts until you specifically close it then untick the checkbox.

At any time the last filter report generated can be viewed by choosing **View last reports** from the **Systems** menu or by holding the Ctrl key down while clicking the yellow Lightbulb button on the main toolbar.

Sorting the Filter List

You can sort the list on any column by clicking the column header and then resort it in reverse order by clicking again.

The first column contain sequential integers so that this column can be used for ranking according to the default column on which the list is first ordered. If the list is reordered by clicking on one of the column headings as just described the ranking column will also be reordered and will no longer be sequential. If it is desired to re-rank the new list sequentially then resave the list using the "Resave" button and reload the HILITE list when the ranking numbers will be reassigned sequentially according to the new order.

Exporting Selected Columns from Filter HILITE list Summary and Accounts to Excel

You can export to Excel selected columns from the Filter HILITE listing (or any other suitable LST file). You can choose any number of columns in any order that you wish and you can choose to include or exclude the column headings. The default is to export all columns in order together with headings.

The Print button on the dialog box performs the export function and you can back out of the next printer dialog box that appears if you do not also require a printed copy. The file will appear in the "WORKING\EXPORT" folder as HiliteLV.CSV that can be directly imported into Excel.

If you wish to customise the columns to be exported select "Edit/Configure Hilite CSV export" from the main Insight Trader menu and follow the prompts.

Autorun Highlights or Generate Chart Arrangement

The list of securities produced by filtering - the scratch file HILITE.LST - can be used in the same way as other list files for Autorunning a template chart or Generating a Chart Arrangement to view all securities that have been identified and may even be used as a reference file for further filter tests.

After setting up a chart arrangement in the required format the highlight list can be Autorun or used to Generate a Chart Arrangement as described in Chapter 5 elsewhere in this manual. Displaying charts of the filter highlight list, using either one of these two methods, is perhaps one of the most important activities to undertake after a filtering.

Multiday Filter

In addition to being able to filter the directory for a single day you can also set it up to perform the filtering for many days in succession producing a filter highlight list for each of those days. These filter lists are given a filename in the format HLddmmyy.LST where ddmmyy is the six character target date for the filter.

Choose **Multiday filter** from the **Systems** menu and you will get the usual dialog box as for a single day filter. When you have completed this, as for the single day, a second dialog will appear asking for the final date after which you wish the filtering to cease.

These lists can be viewed from the **File/Highlight list** menu item or **Alt J** or the fifth button on the main toolbar.

Profitability Testing

Before a profitability test is run on a single security over time you need to specify various important aspects controlling the trading environment in which you will be operating. You first need to set the amount of your initial equity and also the minimum number of units you will be transacting in any one trade.

You also need to decide whether you will be trading long, short or both, whether it is the closing price or another price that you will be basing your trades on. You will also need to specify whether the signals will be acted on immediately or whether you allow a number of days delay after a signal has been given before you enter the trade. Finally there is the entry and exit commissions you will be paying.

In addition to this information you may wish to set various stops to get you out of trades on particular signals other than those given by your basic trading system.

One important consideration to bear in mind is that the accounting procedure in the profitability tester allows you to buy from your equity the maximum number of units that are possible under the minimum parcel size limitation. This means that when you are in a trade you will be holding a certain quantity of cash which is less than the amount necessary to purchase an additional minimum number of securities. At any one time therefore, the value of your equity is the total value of your security holdings plus this residual cash.

The buy and hold strategy calculation which is used as a comparison with the results of your system, is based on an identical process. However, here you will be making only one purchase, on the day your trading system starts operating, of the maximum number of securities that your equity and minimum parcel size will allow. The total equity at any time in the future is the sum of the value of your security holdings at that time plus the residual cash from the original transaction.

You can also run multiple systems against multiple securities in a single batch operation as described later if you need to test many systems on many securities.

Setup Profit Tester

To set up the profitability tester to reflect the trading environment that you wish to simulate select setup **Profit tester** from the **Systems** menu. The following dialog box will appear:

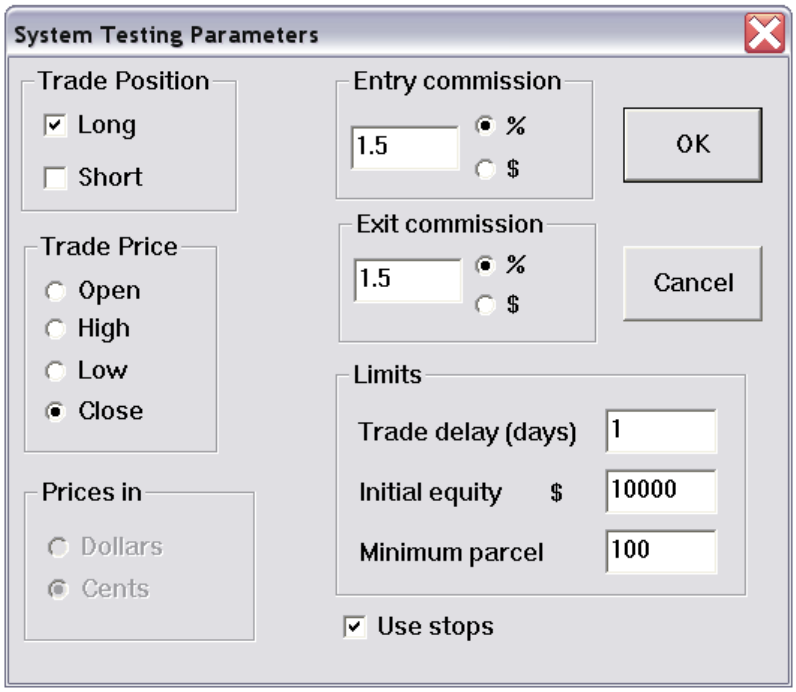


Fig 9.5

You need to specify:

- What position you are trading - Long Short or Both
- What price you are trading - Open High Low or Close
- Delay in days between the signal and the trade
- Entry commission in either % or points
- Exit commission in either % or points
- Your initial equity
- The minimum parcel you can trade
- Whether security prices are in $ or in cents

If you wish to use stops then tick the appropriate box and when you click OK to accept, another dialog will appear to allow you to enter details on the stops you will employ.

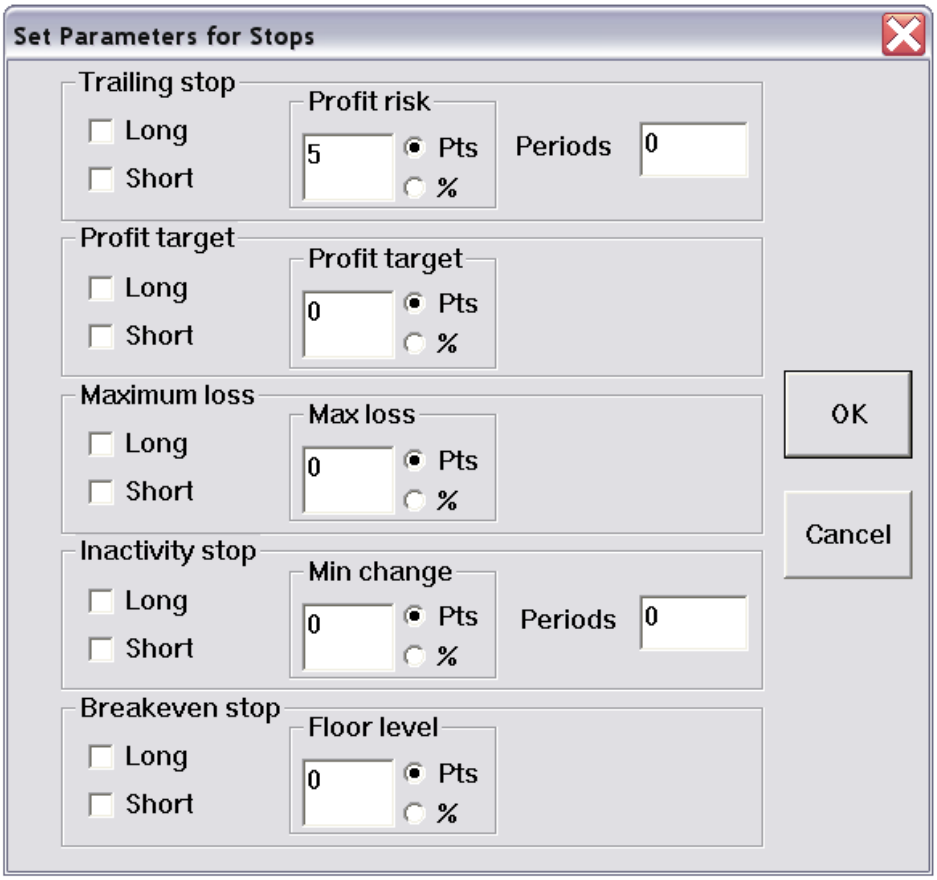


Fig 9.6

Choose up to five stops:

Specify for each whether they apply to Longs Shorts Both or None

Trailing stop

The trailing stop is adjusted every time the price moves to a new extreme and is raised (or lowered on the short side) to be below (or above) the new extreme by a certain % or a number of points.

Enter profit risk in % or points

Enter the number of periods before the present for which you wish to ignore the extreme values.

Profit Target stop

This stop is triggered when a preset profit level has been achieved - expressed in either % or points.

Maximum Acceptable Loss stop

Enter the value in % or points that you wish to limit your maximum loss to.

Inactivity stop

If the price has not reached a certain specified level (% or points) within a certain number of periods then this stop will be triggered.

Breakeven stop

Set a floor level in % or points which the price must reach before this stop will be activated. If the price then penetrates back through the entry price the stop will be triggered at the breakeven level.

Click OK to accept and the Profit test dialog box below will appear

Profitability Test

You can initiate the test from **Profitability test** on the **Systems** menu or it can be arrived at indirectly through the setup dialogs as described above. Enter the start date, end date and code of the security required for the profitability run.

View Profitability Test Report

The output report displays the Date of the trade, the Position held, the Action taken, the Price at which the trade occurred, your remaining Equity, the Profit and Commissions accumulated to that date and the profit a simple Buy&Hold strategy would have produced for comparison.

The most recent profitability test can be viewed at any time by choosing **View last reports** from the **Systems** menu and then selecting **Test report**.

Viewing Trades on your Chart

Once you have finished a profitability run you can load and chart the security that you have just tested. Then press **09** to overlay the BUYS on the chart, **10** to overlay the SELLS and **11** to overlay the STOPS as described previously for event files. These event files have been reserved for the profitability runs so do not use them for other purposes otherwise they will be overwritten. It is convenient to do this on a saved chart set up for the purpose when you are testing systems. Whenever the chart is recalled the buys, sells and stops lines will be automatically updated to reflect those for the last system test run.

Batch Run Multiple Systems against Multiple Securities

An additional Systems procedure enables you to run profitability tests in a batch for a number of systems for a range of securities as a single operation. The systems to be tested should be forced to the top of the list of systems by adding spaces to the front of their titles. The list of securities to be tested should be available in either a standard LST file eg 'ASX200db.lst' or one created for the purpose.

You first need to set up your trading conditions which will be the same for each of the systems to be tested by selecting 'Systems/Setup profit tester' from the main menu. Then also from the main menu select 'Systems/Run profitability batch' and specify the reference file containing the securities to be tested, the number of systems (from the top of the list) to be run for each security, the start date and end date for the test period required. If the security history for any security commences after the start date then it will be tested over its full historical time span.

The results of the test are tabulated with the various systems running horizontally across each row and the different securities running vertically down the columns. The results are expressed in percentage profit achieved at the end of the period for each combination and the system with the maximum profit for each security highlighted. If the the 'Buy and Hold' return exceeds the maximum profit for the systems for a particular security the Buy and Hold figure is also highlighted. An average value over all securities for each system is provided at the end of the table together with a count for each system indicating for how many securities it provided the maximum profit.

As an example the 500 stocks in the All Ordinaries index were each tested for profitability using 20 systems in one operation that took a total of 12 minutes to perform. This represents 10,000 individual profitability tests.

Chapter 10
Portfolio Manager

Important Notice

This portfolio manager provided in Insight Trader is not intended as a replacement for your accountant, tax advisor or financial advisor. It is intended primarily to assist your record keeping and to give you some indication of the current state of your portfolio. In particular, you must realise that the valuation and taxation treatment of share holdings is very complex and subject to constant legislative and interpretative changes and therefore cannot be reliably assessed by any static piece of software.

Moreover, some situations will require individual rulings by the Tax Office to determine your precise tax liabilities and even these can be subject to appeal. Therefore, in the light of these limitations, the various calculations and reports generated by this portfolio manager should be considered indicative only. The basis for any valuation or tax calculation is the original transactions themselves and these should be provided to your accountant or licensed tax advisor for their attention - to determine professionally assessed valuations and tax liabilities for your specific situation.

In particular the alarms provided in the software should not be relied upon as your source of alerts as computer software and hardware systems can fail for many reasons.

Also please note that the Database Manager service (discussed in Chapter 8) does not have sufficient detailed information about your specific situation to enable it to adjust your portfolios automatically for events such as company reconstructions, dividends etc. Therefore you must enter this detail yourself into the portfolio manager from the documentation provided by the companies in question for your individual requirements.

Hardware requirements

Please note that this portfolio manager is designed to be run using a resolution of at least 1280x1024 with normal font sizes. The main portfolio window provides extensive summary data of your whole portfolio on the screen at the one time and your display must therefore have sufficient resolution and a small enough font size to enable this to be achieved. If you need to use large font sizes in your Windows Desktop Settings there is a provision under the **Format** submenu to **Use small font** to compensate otherwise it might not be possible for all the summary information to fit on screen.

Overview

The Insight Trader Portfolio Manager provides you with a sophisticated facility to enter and manage all your share and managed fund transactions. It has its own main window with

menu and toolbar and although intimately integrated into the charting functions of the main Insight Trader software this facility can, if desired, be utilised almost as a standalone application.

The main window of the application presents you with a global overview summary of the currently loaded portfolio providing you with a listing of your holdings, their current value and the capital profits, dividends and interest you have received to date. Total Portfolio Growth over the period and the calculated Annualised Growth Rate are shown at the top of the display. Capital profits are apportioned between realised and unrealised gains and between discountable and non-discountable gains. These net paper profits are calculated assuming selling costs that would be incurred if they were disposed of through your default broker. Also shown are your stop price and net stop losses for each security – ie the amount you would lose if your stop was activated and you exited your position at your stop price through your default broker. You should be aware that slippage may increase the actual loss above the amount shown.

You can link one or more bank accounts to any portfolio and the relevant deposits and withdrawals are automatically inserted as you enter the various share transactions. In addition, by recording other normal bank transactions such as capital deposits, withdrawals, bank fees, interest etc you can track and reconcile these accounts. Your portfolio is considered to consist of the sum of your security holdings as well as the cash in all linked accounts and is displayed as apportioned between these two categories.

Unlike almost all other portfolio managers you can, by specifying a start date and an end date, limit the calculation of profits, income and valuations to the period specified. This is possible because the portfolio is built up from a set of historical transactions that are accumulated in memory to construct the portfolio up to the date specified. Since none of these transactions performs irreversible changes in the portfolio you can, by specifying a particular date in the past or present, show the state and valuation of your portfolio as it was at that date.

To do this it is necessary to use a database that still retains files that may have been delisted or had their names changed and the files that are to be used for this purpose must be the unadjusted files rather than the adjusted files that are used for charting and analysis purposes. The normal Insight Trader database consists of both adjusted and unadjusted files and so is suitable for valuation of portfolios for past dates. The BodhiOne database format also provides both adjusted and unadjusted values for all securities. In contrast, Metastock databases when adjusted to be useful for charting purposes lose the unadjusted information totally and so normal Metastock databases cannot be used for valuations for past dates although they are quite suitable for current valuations.

Each security, income or account transaction is given a unique identity number or **ID**. Each individual parcel of securities is therefore able to be uniquely identified and tracked through the portfolio over time from acquisition to disposal. Moreover, such transactions are sometimes linked to previous transactions and if so are given a link identity number or **LID** that is the ID of the transaction to which they are linked. For example a sale transaction is linked to its initial purchase transaction and the sale LID is the ID of the initial purchase.

A set of global tax rates is specified that will be inherited by default by all portfolios created in that data directory. However, each portfolio's inherited set of tax rates can be customised where they differ from the global default set.

You can benchmark the cumulative growth of your own portfolio against a fixed target growth rate and against a suitable benchmark index. You can automatically display on charts flags to indicate your portfolio buy and sell transactions and mark the average buy price level for all currently open positions. On the F12 databox for any security you can show your current holdings, profit and the additional amount you can purchase without violating your risk management criteria as set in the Risk Calculator.

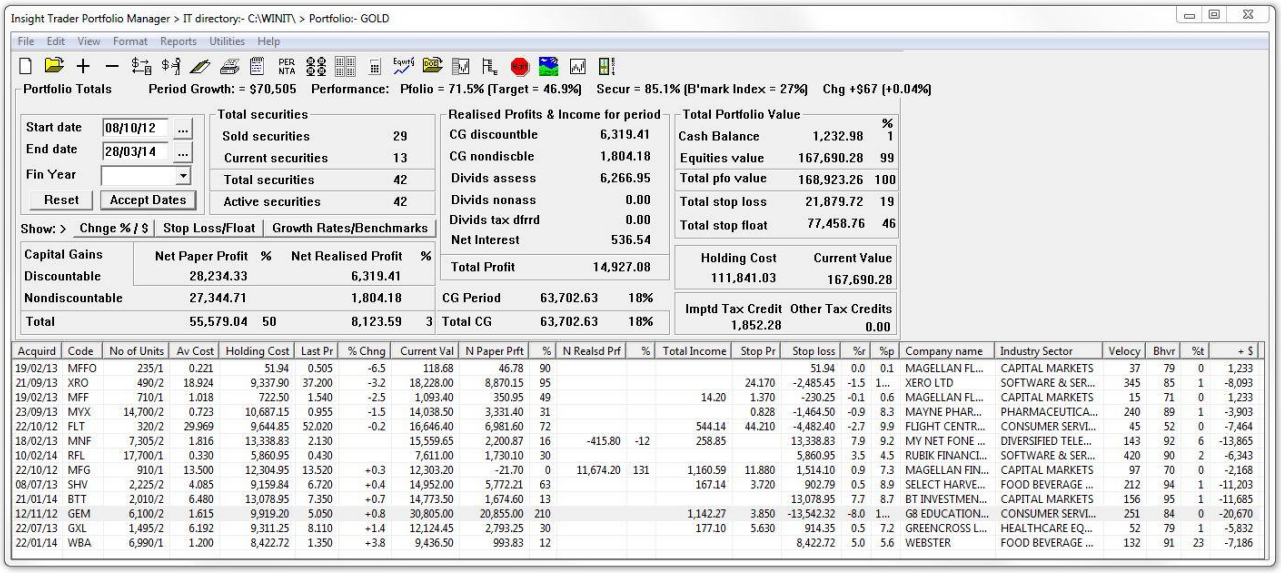

Insight Trader Portfolio Manager > IT directory:- C:\WINIT\ > Portfolio:- GOLD
File Edit View Format Reports Utilities Help
Portfolio Totals Period Growth: = $70,505 Performance: Pfolio = 71.5% (Target = 46.9%) Secur = 85.1% (B'mark Index = 27%) Chg +$67 (+0.04%)
Start date 08/10/12
End date 28/03/14
Fin Year
Reset Accept Dates
Total securities
Sold securities 29
Current securities 13
Total securities 42
Active securities 42
Realised Profits & Income for period
CG discountble 6,319.41
CG nondiscble 1,804.18
Divids assess 6,266.95
Divids nonass 0.00
Divids tax dfrrd 0.00
Net Interest 536.54
Total Profit 14,927.08
CG Period 63,702.63 18%
Total CG 63,702.63 18%
Total Portfolio Value
Cash Balance 1,232.98 1
Equities value 167,690.28 99
Total pfo value 168,923.26 100
Total stop loss 21,879.72 19
Total stop float 77,458.76 46
Holding Cost 111,841.03
Current Value 167,690.28
Imptd Tax Credit 1,852.28
Other Tax Credits 0.00
Show: > Chnge % / $ Stop Loss/Float Growth Rates/Benchmarks
Capital Gains Net Paper Profit % Net Realised Profit %
Discountable 28,234.33 6,319.41
Nondiscountable 27,344.71 1,804.18
Total 55,579.04 50 8,123.59 3
Acquird Code No of Units Av Cost Holding Cost Last Pr % Chng Current Val N Paper Prft % N Realsd Prf % Total Income Stop Pr Stop loss %r %p Company name Industry Sector Velocy Bhvr %t + $
19/02/13 MFFO 235/1 0.221 51.94 0.505 -6.5 118.68 46.78 90 MAGELLAN FL... CAPITAL MARKETS 37 79 0 1,233
21/09/13 XRO 490/2 18.924 9,337.90 37.200 -3.2 18,228.00 8,870.15 95 24.170 -2,485.45 -1.5 1... XERO LTD SOFTWARE & SER... 345 85 1 -8,093
19/02/13 MFF 710/1 1.018 722.50 1.540 -2.5 1,093.40 350.95 49 14.20 1.370 -230.25 -0.1 0.6 MAGELLAN FL... CAPITAL MARKETS 15 71 0 1,233
23/09/13 MYX 14,700/2 0.723 10,687.15 0.955 -1.5 14,038.50 3,331.40 31 0.828 -1,464.50 -0.9 8.3 MAYNE PHAR... PHARMACEUTICA... 240 89 1 -3,903
22/10/12 FLT 320/2 29.969 9,644.85 52.020 -0.2 16,646.40 6,981.60 72 544.14 44.210 -4,482.40 -2.7 9.9 FLIGHT CENTR... CONSUMER SERVI... 45 52 0 -7,464
18/02/13 MNF 7,305/2 1.816 13,338.83 2.130 15,559.65 2,200.87 16 -415.80 -12 258.85 13,338.83 7.9 9.2 MY NET FONE ... DIVERSIFIED TELE... 143 92 6 -13,865
10/02/14 RFL 17,700/1 0.330 5,860.95 0.430 7,611.00 1,730.10 30 5,860.95 3.5 4.5 RUBIK FINANCI... SOFTWARE & SER... 420 90 2 -6,343
22/10/12 MFG 910/1 13.500 12,304.95 13.520 +0.3 12,303.20 -21.70 0 11,674.20 131 1,160.59 11.880 1,514.10 0.9 7.3 MAGELLAN FIN... CAPITAL MARKETS 97 70 0 -2,168
08/07/13 SHV 2,225/2 4.085 9,159.84 6.720 +0.4 14,952.00 5,772.21 63 167.14 3.720 902.79 0.5 8.9 SELECT HARVE... FOOD BEVERAGE ... 212 94 1 -11,203
21/01/14 BTT 2,010/2 6.480 13,078.95 7.350 +0.7 14,773.50 1,674.60 13 13,078.95 7.7 8.7 BT INVESTMEN... CAPITAL MARKETS 156 95 1 -11,685
12/11/12 GEM 6,100/2 1.615 9,919.20 5.050 +0.8 30,805.00 20,855.00 210 1,142.27 3.850 -13,542.32 -8.0 1... G8 EDUCATION... CONSUMER SERVI... 251 84 0 -20,670
22/07/13 GXL 1,495/2 6.192 9,311.25 8.110 +1.4 12,124.45 2,793.25 30 177.10 5.630 914.35 0.5 7.2 GREENCROSS L... HEALTHCARE EQ... 52 79 1 -5,832
22/01/14 WBA 6,990/1 1.200 8,422.72 1.350 +3.8 9,436.50 993.83 12 8,422.72 5.0 5.6 WEBSTER FOOD BEVERAGE ... 132 91 23 -7,186

Fig 10.1

Transactions are entered under three categories:

1. Security transaction such as buy, sell, exercise, calls, merge etc
2. Income transactions for share dividends, trust and fund distributions etc
3. Account transactions such as capital deposits and withdrawals, interest etc

A printed report can be produced for the Portfolio Summary. Amongst the other reports available statements can be generated for each Account, and Dividend Statements and Security Transaction Statements for single securities or all securities can be produced. Reports are also available for Capital Gains, Profitability of Trades, Traders Closing Stock, Traders Sales and Costs, Miscellaneous Income and Expenses, Portfolio Statistics. These reports can also be printed as a batch of reports in the one operation. CSV files of each of these reports are automatically generated and can be exported to spreadsheets programs such as Excel.

Several individual portfolios may be “wrapped” into a single combined portfolio to provide an overall view of your total holdings.

A Risk Calculator is included as a tool for money management calculations.

It is also possible to generate “equity curves” as well as charts of other key performance indicators of your portfolios over time.

For security of information each portfolio can be assigned a unique password to keep its contents private.

Provision has been made to convert files created from the portfolio manager provided in previous versions of Insight Trader. However, because of the much larger number of fields for the various categories of data that are now available the diversity of categorisation in the converted files will be correspondingly limited. Rather than converting your previous portfolio you may prefer to enter it again from scratch to take advantage of this diversity.

If preferred the previous portfolio manager can be used in place of the new one by ticking the appropriate box under **Format/Preferences** from the main menu of the Insight Trader main window.

To enter the portfolio manager you can access it by selecting **Portfolio** from the main Insight Trader menu or by clicking button no 12 on the toolbar or via the speedkey **Ctrl+Alt+P**. The Portfolio Manager window will appear with its menu and toolbar as shown in Fig 10.1.

Creating a Portfolio

Setting up Your Global Defaults

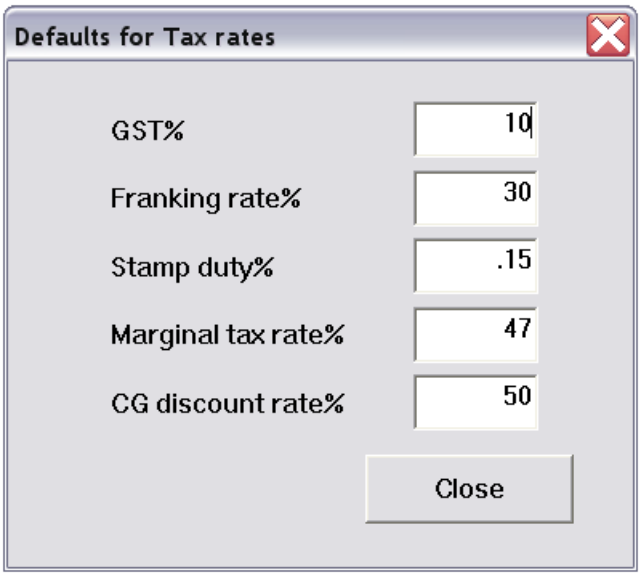


Fig 10.2

Before you create your first portfolio in any given data directory it is necessary to check your default tax rates under **Format/Set global default tax rates** and change them where necessary. These values will be automatically inherited by each new portfolio you create in that data directory but can be modified in each specific portfolio. Just select the menu item **Format/Set portfolio tax rates** when that portfolio is currently loaded and edit the values to what you require.

Registering a New Broker

You should register at least one broker that you can use to provide automatic calculation and entering of brokerage when the security transaction forms are subsequently presented for completion. There is provision for three separate brackets of rate structure for each broker. Choose the menu item **Edit/Brokers registered** or button no 11 on the toolbar and enter the details for the broker(s) as requested below. Then press the **Add Broker** button to register the broker's details. It is suggested that you remove the information from the positions for the fictitious brokers provided as examples with the program and reuse these positions for your own real information.

Please note that an existing broker position in the list cannot actually be deleted because one or more of your existing portfolios might refer to it. However, you can reuse any particular position by selecting the broker position to be reused and pressing the Delete key. This will clear the information currently stored against that position number and you can then edit it to replace it with new broker information.

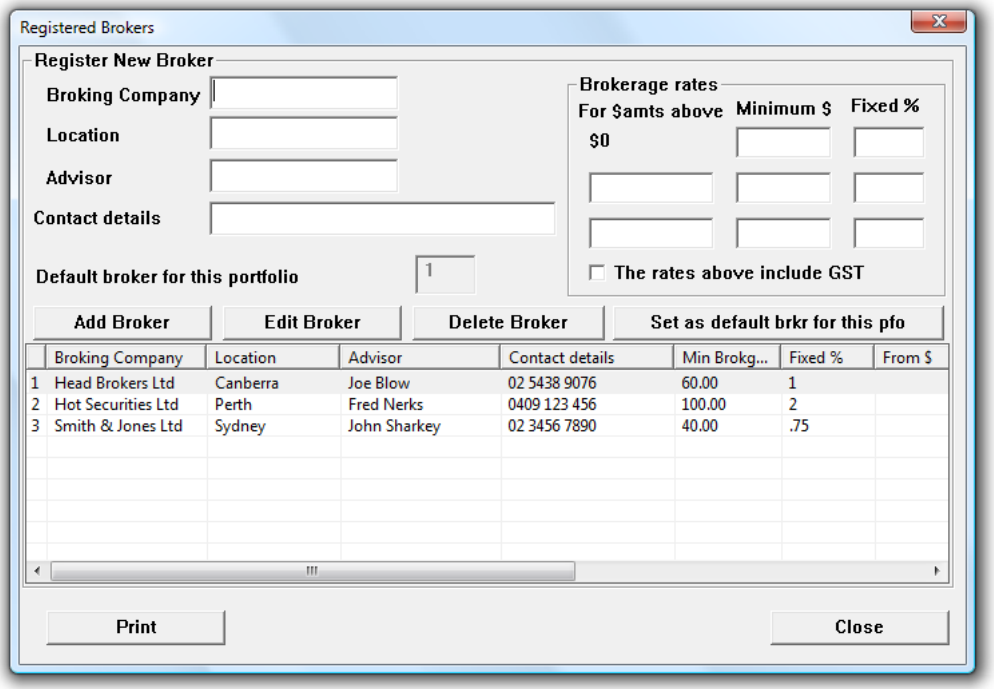


Fig 10.3

Registering a New Account

From **Edit/Accounts registered,** or button no 12 on the toolbar, enter the required information as requested for at least one account. (*Number of Account* does not have to be the actual account number if you are worried about security. It can be any identifying text such as "ANZ CMT Super Acc") Then press the **Add Account** button to register the account details.

Please note that an existing account position in the list cannot actually be deleted because one or more of your existing portfolios might refer to it. However, you can reuse any particular position by selecting the account position to be reused and pressing the Delete key. This will clear the information currently stored against that position number and you can then edit it to replace it with new account information. It is suggested that you remove the information from the positions for the fictitious accounts provided as examples with the program and reuse these positions for your own real information.

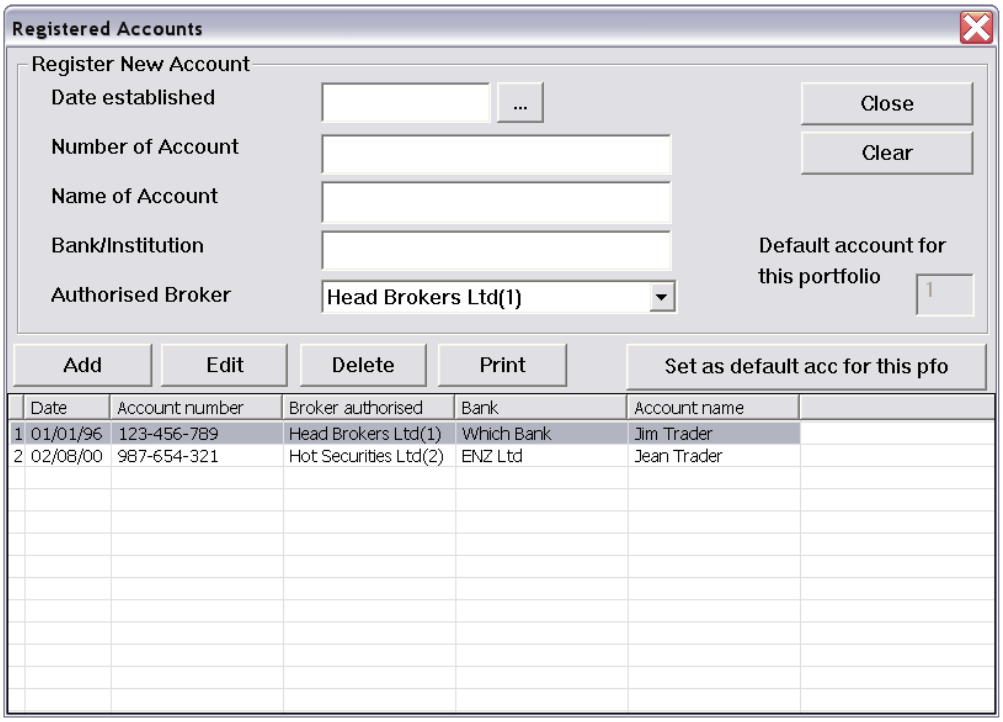


Fig 10.4

The Three System Accounts

There are three inbuilt system accounts designated **<no account>** **<cash drawer>** and **<suspense account>** that are numbered 0, -1 and -2 respectively. The use of these accounts will be discussed below.

Use of the Account <no account>

Account number zero designated **<no account>** appearing in the transaction dialogs (but not displayed in in this listing) is used as a slush account to pass through transactions such as dividend reinvestment and demutualisations that require a notional purchase at a given unit price but which do not actually result in a transaction in any physical account. The use of this account will be discussed as we come to the relevant sections. The account **<no account>** is considered external to the portfolio and its balance is not included in valuations. Security

transaction deposits and withdrawals from this account are instead treated as capital transfers to and from the portfolio.

Use of the Account <cash drawer>

A very useful additional system account is known as a "Cash Drawer" account. **<cash drawer>** can be used to accept payments and "park" them until they are finally transferred to a formal account. One obvious example would be if you received a dividend cheque from a company, put it in a "drawer", and did not deposit it into your bank account until sometime after the payment date.

To handle this you would enter details of the dividend on the payment date and attribute the proceeds to **<cash drawer>** account. When you finally deposited the cheque in your bank account you would record an Account Transaction on this date transferring the funds from **<cash drawer>** to your bank account.

This way you receive your funds on the payment date for tax purposes but they do not appear in your account statement until the date you actually deposit them. This account can be used for many other similar purposes – for both deposit and withdrawal transactions.

Use of the Account <suspense account>

The purpose of the **<suspense account>** is to accommodate, notionally, any funds during the transition between the transaction date (ie when funds are committed to a purchase, sale, dividend etc) and the payment date or settlement date (ie when the entry for the funds transfer actually appears in the physical bank account). In contrast to the two previous system accounts the **<suspense account>** is not available for use by the user directly.

For example a share purchase transaction is considered to be effective on the transaction date and the value of those equities are immediately assigned to the portfolio on that date. However, with the T+3 rule, settlement does not take place until usually three working days after the purchase. So between the purchase date and the payment date the equities would be counted as part of the value of the equity component of the portfolio while the funds would still remain within the bank account and hence this amount would be double counted on valuation of the portfolio.

To overcome this difficulty a notional system account, the **<suspense account>**, has been created to debit or credit funds that are in transit. The suspense account is considered part of the total portfolio for valuation purposes and its balance is added to the value of the equities plus all linked bank accounts, including the **<cash drawer>** to get the total portfolio valuation.

The suspense account can therefore be considered as a repository for all entitlements and liabilities of the portfolio that are not reflected in the value of securities or physical bank accounts.

The suspense account cannot be utilised directly by the user but instead is automatically invoked whenever a date is entered into the "Pay date" field on the Security Transactions dialog, the Income Transactions dialog or the Accounts Transaction dialog.

Although it is not necessary to utilise the Pay date field (leaving it blank it will assume that the payment date is the same as the transaction date) if you do then it will provide two major advantages:

1) The dates shown on your portfolio account reports will correspond with the dates shown in your actual bank statement.
2) Portfolio valuations will correctly include dividends and capital returns and will avoid the apparent loss in value in your portfolio between the Ex-date and the Payment date where your shares lose value but the dividend or capital return has not yet appeared in your accounts.

The **transaction date** for dividends, capital returns and call payments is the **exdate** on which the securities change value because of the transaction. For taxation purposes the changes in your holdings (purchases, sales, capital returns, calls) are considered to have taken place on the transaction date (or ex-date). In contrast your dividends are taken to have been received on the payment date rather than on the date you became entitled to them - the ex-date.

Payment dates are when the payments are deposited or paid out from the accounts. Between the transaction date and the payment date the funds are assumed to have been deposited into or paid out from the **<Suspense account>** on the transaction date. After the payment date has passed (ie after the portfolio End date is later than the payment date) the funds are assumed to be paid into or out of the physical account on the payment date. During portfolio valuation the **<Suspense account>** is counted as an integral part of the portfolio value unlike the **<No account>**.

You can continue to use a single date for transactions if you wish in which case, if left blank, the payment date will assumed to be the same as the transaction date.

Entering the transactions

Creating the New Portfolio File

Select **File/New portfolio** from the main menu or the first button on the toolbar and type in the name of the portfolio you wish to create. If it already exists then it will load the existing portfolio otherwise it will create a new one.

Go to **Format/Set portfolio tax rates** and change any values you need for this portfolio. Then choose **Edit/Brokers registered** or button no 11 on the toolbar and select the default broker you require for this portfolio and press the button **Set as default broker for this pfo**. Similarly under **Edit/Accounts registered** select the default account you require for this portfolio and press the button **Set as default account for this pfo.**

You are now ready to begin entering transaction information for your new portfolio.

Entering Dates on Transaction Dialogs

The three transaction dialogs to be discussed have two or three date fields that you can use. Please refer to the previous section on **<suspense account>** for a description of the use of the Transaction date and the Payment date. The Expiry date on the Security Transaction dialog is informational only and is not used in any calculations.

There are three ways you can enter your dates into these date fields. You can pick a date off the calendar that appears when you click the button with the three dots just to the right of the box. The next method is to type in the complete date in any of the following forms:

080915, 08/9/15, 8/9/15, 08.09.15, 8.9.15

There is a third method that is very fast if you are keying in a series of related dates where it is necessary to enter only part of the date. If the last entered date was say 25/12/14 then entering the following will produce the dates indicated when the cursor leaves the box - eg by tabbing or clicking in another box:

Enter	Date recorded
8	08/12/14
8/6 or 8.6	08/06/14
t	today's date

Warnings are in place to alert you to the possibility that you may have entered an incorrect date on a transaction form. You will be alerted if the date that you have entered is prior to the 'Start Date' of the portfolio or after the 'End Date'. These dates are set on the main portfolio summary dialog. If you want a tight alert you can set them temporarily to a narrow date range while entering a lot of data and then change them back to a more convenient setting later. You might find however that a financial year gives both sufficient protection while also providing a convenient date range to work in normally.

Account Transaction – Initial Capital Deposit

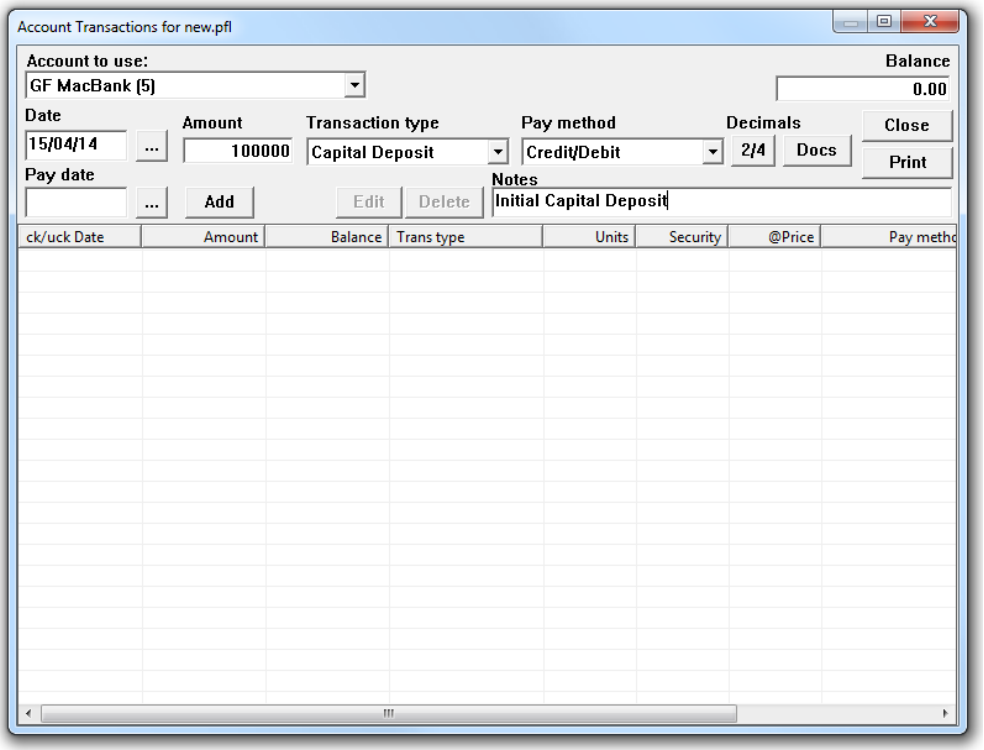


Fig 10.5

Before you begin purchase of any securities it is normal to deposit an amount of capital in an account that is linked to your portfolio. Click button number 7 on the toolbar and check that

the account number shown is the default account for the portfolio and then click button 7 and enter the **Date** and the **Amount** of the deposit. Also select the **Transaction Type** as **Capital deposit** and then choose the appropriate **Pay method**. Press the **Add Transaction** button to record the transaction and this will appear in the list below. You are now ready to start entering purchase and other security transactions.

Security Transaction - Purchase

If you are entering a transaction for a security not already in your portfolio you need to select from the main menu **Edit/Add a new security** or click the third toolbar button to bring up the Security Transaction dialog box. The first transaction will normally be a **Purchase/acquire** transaction which should be selected from the **Transaction Type** drop down list

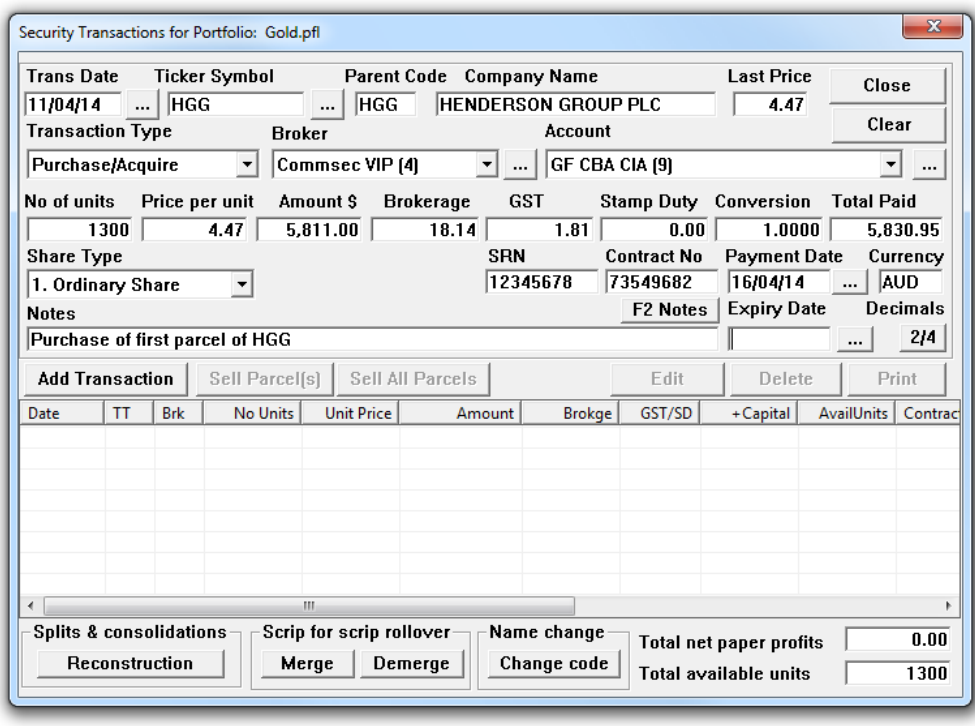


Fig 10.6

Next check that the broker and account number shown are appropriate for this transaction and, if necessary, alter to your requirements. Then enter the **Transaction date** of the purchase in the box provided or select the date from the dropdown calendar accessed via the small button adjacent to the date box. If you then enter the **Ticker symbol** for the security its **Parent code**, **Company name** and **Last price** will be filled in automatically by the system when the cursor is moved to these boxes. They can be edited if the information needs to be modified. After entering the **Number of units** and **Price per unit** the **Amount**, **Brokerage**, **GST**, **Stamp Duty** and **Total paid** fields will be automatically filled in when that box receives the cursor by either clicking in it or by tabbing across. Alternatively, if you have values in the **Number of units** field and the **Amount** field then when you click in the **Price per unit** field it will automatically calculate this value from the values in the other two fields.

Any boxes not activated in this way will be left blank and hence receive a zero value. As previously, these amounts so calculated can be edited if the values need to be altered.

Automatic calculation is done on the basis of brokerage rates associated with those set for the selected broker shown above and tax rates that have been set for that portfolio as described previously. From **Share type** box you should select from the drop down list the type of security being purchased. The **Notes**, **Expiry date** and **Contract no** fields are purely informational and therefore optional. (The **Currency** and **Conversion rate** fields are informational only and used for foreign transactions.)

When entering data on the Portfolio Transaction Dialog you can set the program to autofill the **Trans**action **Date** box as well as the **Payment Date** box. The transaction date will be set to today's date if no other transactions have been entered during the session but otherwise will be set to the last transaction date used. The Payment Date box will be filled with the T+3 date that is three business days after the transaction date. This will ensure that the corresponding entries automatically appearing in your portfolio bank accounts will bear the correct date to those on your actual bank statement. If there are intervening holidays (apart from weekends) you will have to manually edit the Payment Date accordingly. To turn on the Payment Date autofill from the main menu click:

"Format/Autofill trans/paydates for T+3"

When all necessary information has been entered click the **Add Transaction** button to record the first purchase. This action has now registered this particular security as being in your portfolio and you will see the details of the transaction just entered in the list below. Further security transactions can be entered for this security without leaving the dialog box but you will see that the ticker code and parent code have been greyed out preventing you from changing it to another code.

Close the dialog box and you will see details of your security appear in the list of the main portfolio summary window.

(Now that this security has been registered in this portfolio any further transactions on it must be entered by first clicking on the security required in the list of the main window to highlight it and then clicking toolbar button number 5 - **Security transactions.** Alternatively, simply double clicking on the security in the list will perform an identical function. The same dialog box as before will appear with the relevant security code appearing in the greyed out **Ticker symbol** box and details for the next transaction can be entered and accepted. If you instead attempt to input further transactions of an already registered security code through the **Add a new security** option you will be informed that that security is already registered in your portfolio.)

Fractions of a unit for Unlisted Trusts

Ordinary shares in listed companies are traded in whole numbers of shares while Unlisted Unit Trusts can trade in fractions of a unit. To accommodate this requirement the portfolio manager allows you to enter fractions of a unit with up to four decimal places of precision.

When entering numbers of units for an unlisted unit trust you should always enter a decimal point in the number - even if there are no digits after the decimal point - to indicate to the program that you are generally wishing to work in fractions of a unit for that particular security.

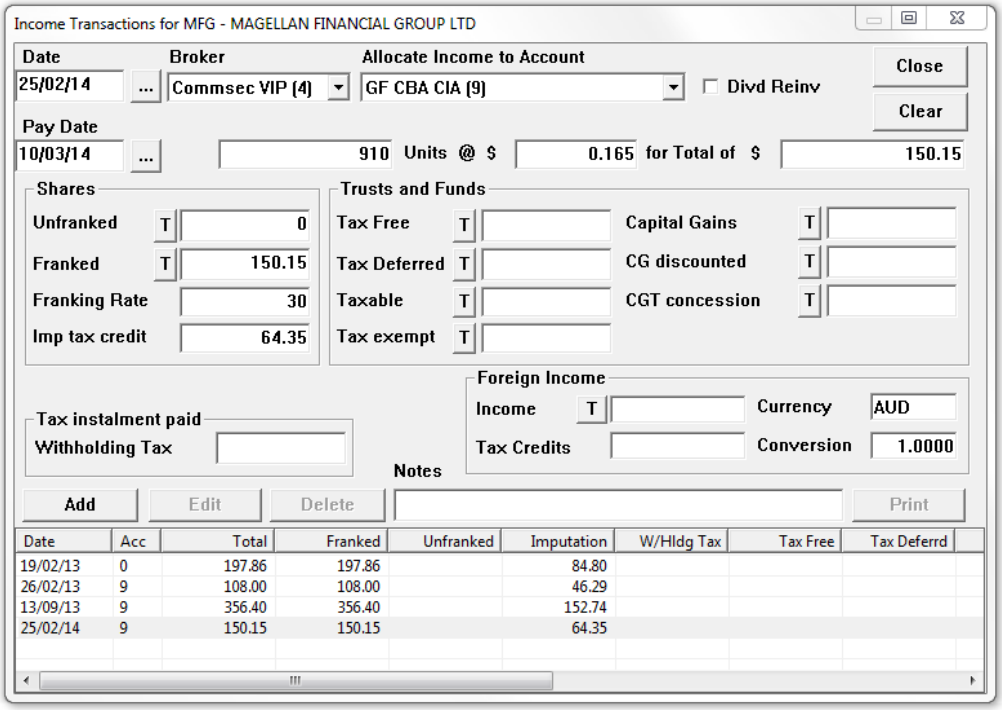


Fig 10.7

Income Transaction – Dividend

To access the Income Transaction dialog first highlight the required security in the list of the main window and then click on toolbar button number 6 – Income Transactions. (Alternatively simply **Right Click** on the desired security in the security list and this will invoke the Income Transactions dialog for that security.)

Enter the **Date** for the dividend payment date if you are using a single date system or the exdate for a dual date entry when the payment date is put in the **Pay date** field below. and check that the **Broker** and **Account** are correct. The number of units of that security that you currently hold should appear automatically but can be edited as required. Enter the rate per unit for the dividend and the total dividend will automatically appear in its box but this can also be edited if it needs to be modified.

If the dividend is totally **Franked** or totally **Unfranked** click the **T** button next to the appropriate box and the total will be transferred to this location. If it is partially franked then type the partial amount into one of the boxes and then simply click in the other box to automatically insert the difference between the total and this value. Similarly, clicking in the **Imp tax credit** box will automatically calculate the imputed tax credit using the **Franking rate** shown. Click the **Add** button to append the dividend transaction to the list below.

Close the Income transaction dialog and you will see that this income information is transferred to the summary for the main portfolio window.

Security Transaction – Sale

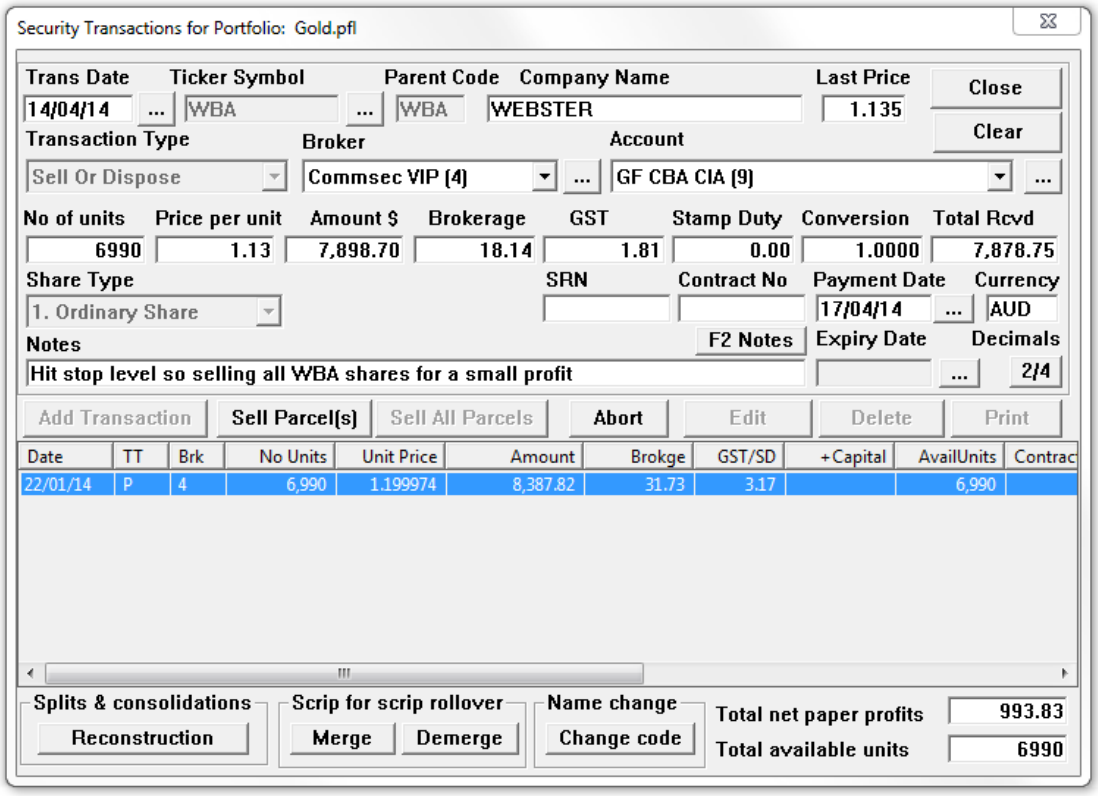


Fig 10.8

To sell a security you must access the Security Transaction dialog box again. Double click on the security required in the list of the main portfolio window and the Security Transaction dialog will appear. The parcel you attempt to sell must have a number of available units in the **Avail Units** column of the list indicating that there are available units to sell. (If you have checked **Format/Colour profit/loss** on the main menu then any parcels you have held for over a year will be coloured blue.)

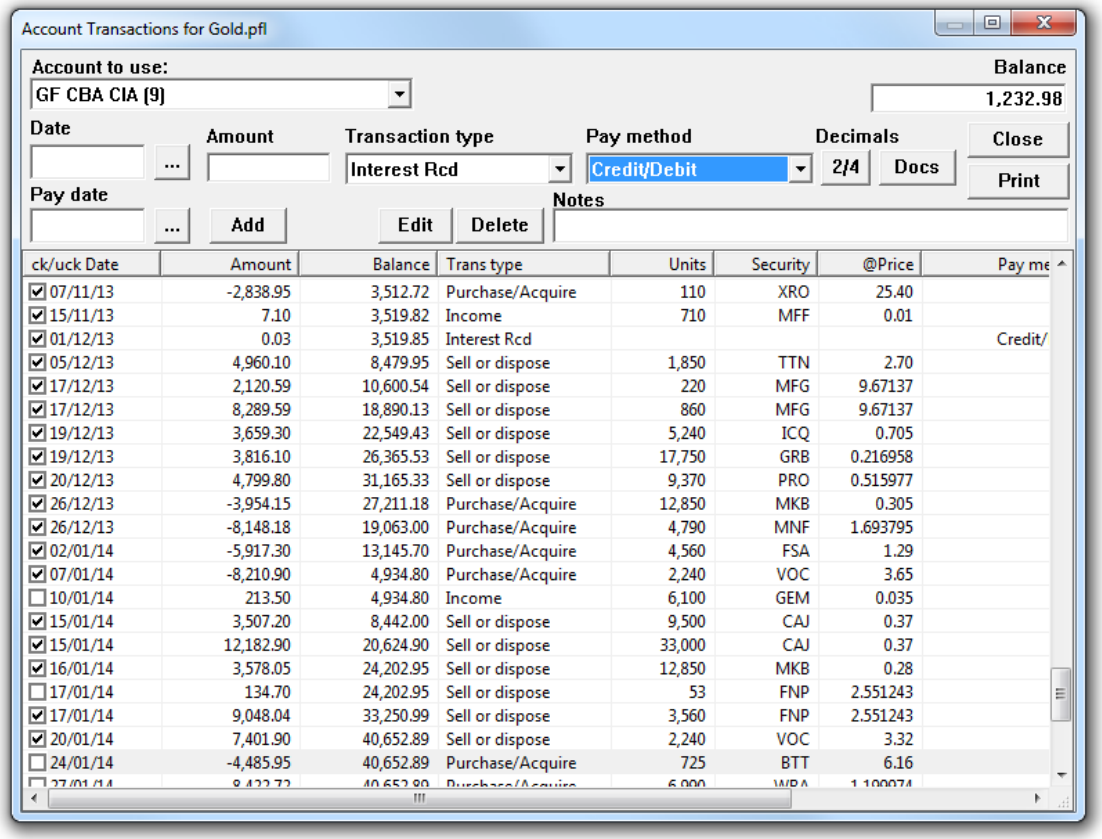
(This should not be confused with the figure in the **No Units** column which is the number of units that were originally bought at the unit price in the **Unit Price** column. These numbers can be different as a result of units having been sold or bonus units of the same security having been allocated or capital reconstructions such as splits and issues adding or subtracting units.)

Select the parcel you wish to sell from the list and then click the **Sell Parcel(s)** button. The total number of available units in the parcel will be automatically displayed in the **No of units** box. If you do not wish to sell the whole parcel then you may edit this to be less than the number shown. Fill in the remainder of the information relevant to the sale in a similar way to what you did for the initial purchase and click the **Sell Parcel(s)**. The sale transaction **S** will appear in the list below and both the **Avail units** in the column and the **Total available units** box at the bottom will show zero.

If you had only sold part of the parcel then the available units in this parcel would have been reduced to that remaining after the sale.

The other columns in the **Security transactions** list are fairly self explanatory. However, it is necessary to explain that the **Amount** is simply the number of units times the unit price, the **+Capital** is the net amount of extra capital contributed towards or returned from the parcel subsequent to its initial purchase through either Calls for additional instalment payments or Capital Returns or costs of options exercised in acquiring the parcel. The **Gross profit** shown for sold parcels is actually the net profit and includes both buy and sell fees as these are known. For unsold parcels the Gross profit assumes a sale of the parcel at the **Last price** and includes the buy fees but not the sell fees. Sell fees for a single parcel cannot be reliably estimated as the parcel in question might be sold together with many other parcels in a single transaction and the apportioned sell fees for that parcel would be considerably less than if it were sold separately.

Other fields displayed in the list are the number of days held and unique ID and Linked IDs as well as the Annualised Growth Rate for that parcel calculated according to the procedure discussed elsewhere in this chapter.



ck/uck Date	Amount	Balance	Trans type	Units	Security	@Price	Pay me
07/11/13	-2,838.95	3,512.72	Purchase/Acquire	110	XRO	25.40	
15/11/13	7.10	3,519.82	Income	710	MFF	0.01	
01/12/13	0.03	3,519.85	Interest Rcd				Credit/
05/12/13	4,960.10	8,479.95	Sell or dispose	1,850	TTN	2.70	
17/12/13	2,120.59	10,600.54	Sell or dispose	220	MFG	9.67137	
17/12/13	8,289.59	18,890.13	Sell or dispose	860	MFG	9.67137	
19/12/13	3,659.30	22,549.43	Sell or dispose	5,240	ICQ	0.705	
19/12/13	3,816.10	26,365.53	Sell or dispose	17,750	GRB	0.216958	
20/12/13	4,799.80	31,165.33	Sell or dispose	9,370	PRO	0.515977	
26/12/13	-3,954.15	27,211.18	Purchase/Acquire	12,850	MKB	0.305	
26/12/13	-8,148.18	19,063.00	Purchase/Acquire	4,790	MNF	1.693795	
02/01/14	-5,917.30	13,145.70	Purchase/Acquire	4,560	FSA	1.29	
07/01/14	-8,210.90	4,934.80	Purchase/Acquire	2,240	VOC	3.65	
10/01/14	213.50	4,934.80	Income	6,100	GEM	0.035	
15/01/14	3,507.20	8,442.00	Sell or dispose	9,500	CAJ	0.37	
15/01/14	12,182.90	20,624.90	Sell or dispose	33,000	CAJ	0.37	
16/01/14	3,578.05	24,202.95	Sell or dispose	12,850	MKB	0.28	
17/01/14	134.70	24,202.95	Sell or dispose	53	FNP	2.551243	
17/01/14	9,048.04	33,250.99	Sell or dispose	3,560	FNP	2.551243	
20/01/14	7,401.90	40,652.89	Sell or dispose	2,240	VOC	3.32	
24/01/14	-4,485.95	40,652.89	Purchase/Acquire	725	BTT	6.16	

Fig 10.9

When you now exit the Security Transactions dialog box you will have completed a cycle of the most common operations of the Portfolio Manager. If you now look in your Account transactions form by clicking button number 5 on the toolbar you will see entries for the purchase and sale that you have made in addition to the initial deposit of capital.

There will also be a figure in the Balance column that should correspond to the balance actually in the account. If it does not then it is possible that there are one or more normal bank transactions, unrelated to direct security transactions, that need to be entered. These might include bank fees, interest, tax, capital deposits or withdrawals and so on.

Security Transactions – Short Sale

To short sell a security that you do not own then you should enter a purchase transaction of a negative number of units. To cover your short sale you should select that negative parcel and then click the appropriate sell button.

The Halt Button

In the portfolio manager the "Halt" toolbar button allows you to suppress automatic recalculation of the portfolio following every entry. This is useful for portfolios with a very large number of transactions where recalculation can take a long time. If you depress this button it will cause recalculation to suspend while you are entering a lot of data. After you have finished then toggle the button off again and recalculation will occur once rather than after every new entry.

Reconciling Portfolio Accounts with your Bank Statements

It is easy to reconcile your bank accounts using the system of checkboxes. In the account transaction dialog you will find checkboxes against the entry for each transaction. To reconcile an account click on the row (but not the checkbox) corresponding to the date for the final balance on the bank statement for your account (or the last entry before this date). Then uncheck any boxes above this line for transactions that have not been processed yet as indicated in your bank statement and of course also ensure that all processed items are checked. Unchecking a box will prevent the associated amount being added to the running balance. When you have done this for all outstanding transactions if the Balance shown on the dialog at the cursor bar corresponds with the Balance shown in your bank statement then your account reconciles to that date.

All transactions prior to the first in the list ("Format/Hide Transactions closed before date range") are assumed to be reconciled (ie checked).

The balance shown in the Balance column at any date is obtained by adding all prior transaction amounts that have been checked. However, the balance shown in the Balance edit box at top right is the total sum of all transaction amounts up to the final entry irrespective of their check state.

The position of the cursor (corresponding to the date you have last reconciled) is saved along with any transactions that have been unchecked and therefore outstanding. However if you move the cursor bar from the reconciliation row before exiting the dialog then it will reappear at this new position when you re-enter the dialog.

Please note that the list will move bodily in the window space available so that the reference cursor default position displays at the bottom of the window so that you can see earlier transactions above that may need to be unchecked. The list may appear to jump suddenly. Make sure therefore that you have first clicked the required cursor default position by highlighting the row (not the checkbox) that you wish to appear at the bottom of the window.

These cursor bar positions and outstanding transactions are saved for all your accounts and will reappear whenever you access the Account Transactions dialog for that particular account at a later stage.

By clicking the Date column header button you can toggle all displayed checkboxes to be either all checked or all unchecked as follows: Positioning the cursor bar on a particular row in the list and clicking the "Ck/Uck Date" column heading will check or uncheck all rows below the cursor bar. Control clicking this heading will toggle checks for all entries at and above the cursor bar.

Any new transactions or edited transactions will appear unticked.

If your Portfolio End Date is not set at today's date you will still be able to check and uncheck boxes as above but these checks will not be saved. There is a warning message to this effect that appears in this case when you access the Account Transactions Dialog.

There is a limit of 100 for the maximum number of unreconciled transactions that can be saved for any one account. Later transactions above the 100 limit will be saved as checked.

When you back up a portfolio using "File/Backup a portfolio" the check and reconciliation status is backed up at the same time.

Displaying the Calculated Portfolio

Portfolio Summary

On returning to the main Portfolio window you will see a summary of your Portfolio giving

1. Total number of securities apportioned between sold and current
2. Profits and income for the period specified by the start date and the end date. These are apportioned between realised capital gains, dividends including imputed tax credits, and net interest and cash management trust income for your accounts.
3. Total portfolio value apportioned between the value of Equities and Cash balance of all linked accounts.

The capital values and costs are displayed in several ways as shown in Fig 10.1. **Holding cost** for the whole portfolio is the sum of the costs of the units, additional capital payment less capital returns and all buy costs including brokerage and taxes. The **Current value** of the units is the sum of the various numbers of each security times the current price of its units.

The **Net Paper profit** is the sum of unrealised net capital gains for all securities currently held at the **End date** and includes the estimated costs of disposal of all remaining parcels of each security as a single transaction. The **Net Realised Profit** is the net profit that has actually been received over the specified date range and includes all costs of acquisition and disposal. The **Total CG** is the sum of these and represents the total capital gain income that

would have to be reported over the date range if all remaining securities were sold. All three values are also expressed as percentages of the original holding costs of the units involved. Capital gains in both cases are apportioned into discountable and non-discountable gains ie those held for more than 12 months where the capital gains discount can be applied and those held for less than 12 months.

There is also an item **CG period** that displays the increase in capital gains, both realised and paper, that have accumulated over the period of the date range.

Finally, in the section Realised Profits & Income for the Period, dividends (including imputation credits) are apportioned into assessable, ie taxable, those that are non-assessable or not taxableand those that are tax deferred. **Imputed Tax Credit** for the whole portfolio is specified separately at the lower right.

The securities you hold or have held are listed below in the table of the main window. The columns from left to right record for each security the Date you acquired your first parcel, security code, number of units/number of tranches, average cost, holding cost, last price, % (or $) change in last price from previous close, current value, net paper profit, % net paper profit, net realized profit, % net realized profit, total income for period including any imputation credits, stop price, stop loss (amount you would lose if you sold at your stop price) or stop float (amount you would lose from current value if you sold at your stop price), the % this represents of total portfolio value, % that the value of this security holding represents of your total security holdings or alternatively of your total portfolio, company name and industry sector.

The listing can be sorted on any of the various columns by clicking on its heading. The last column on which the main portfolio window has been sorted and its ascending/descending ordering will be retained within and between sessions and portfolios. This sorting will also be maintained in the printed report.

Final Four Columns in the Portfolio Summary

The final four columns in the main Portfolio Summary screen consist of two performance indicators and two risk measures. The first two are the performance indicators Velocity and Behaviour that have been discussed elsewhere and provide current values of these for each of the securities you are holding. The next two columns are the risk based values of “%t” and “+ $K” (or “+ $”)

The column "%t" provides a measure of what the value of each of your current holdings represents as a percentage of the average daily turnover in that particular stock. For liquidity reasons you might wish to limit your exposure to no more than say 10% or 20% of average daily turnover. We use as a proxy for average daily turnover the same 20 day average daily moneyflow figure that appears on the F12 data box. The liquidity criterion is set (as a % of average daily turnover) from the main menu under "Format/Set liquidity risk limit" where the default is 10%. It can also be altered from the Risk Calculator. If the turnover limit is set to zero then this criterion is ignored in the calculation.

The column "+ $K" on the other hand displays the additional value that can be added to your existing holdings without violating any of your risk management limits. The figure is the extra amount (expressed in $1000's) by which you can increase your holdings of any one stock. It takes account of the four risk criteria for that stock viz: (i) Max % risk allowed on

total capital for each holding (ii) Limit on maximum holding size (iii) The liquidity risk limit (as a % of average daily turnover) (iv) The limit imposed by the remaining cash available. For smaller portfolios < $500,000 this column is headed "+ $" and gives the figure in single dollars rather than thousands of dollars.

Make sure that your risk calculator settings are adjusted to values appropriate for your circumstances. The +$K values for each stock should be regarded as a guide only and the risk calculator itself should be consulted for each purchase. This is particularly important since the former figure is based on the last traded price in your database which could be quite different from the actual current price or the price you intend to pay. The limit imposed by the cash available to purchase is taken automatically from your portfolio. If your cash balance is below zero it is assumed that you are not using the account facility and this limit is ignored. When your cash balance is getting low each successive additional purchase will alter the +$K values for all other stocks.

Whenever there is a negative “+ $” value this indicates that one of your criteria has caused the value of your holding to exceed the maximum allowed by your limits for that stock. (Negative values can occur naturally when the price of a holding grows significantly following initial purchase) Variables which affect this figure are:

- maximum % of total capital allowed for any one holding:
  total portfolio value
- maximum % risk to total capital from any one stock (or all stocks if using Method 3):
  buy price
  stop price
  current price
  number of shares
  current value of holdings
  total portfolio value
- maximum percent of average daily turnover allowed:
  20 day average money flow
- available cash balance

Criteria (iii) and (iv) are similarly also ignored in the Risk Calculator itself if the daily turnover limit is set to zero or the available cash is negative respectively.

Values of the respective variables are automatically sourced from the risk calculator settings as well as figures from elsewhere on the portfolio summary screen and several of these will change from day to day.

Display Preferences

The column widths for the Portfolio Manager main summary screen can be adjusted and will be maintained within and between sessions. To return the column widths to their default values just click "Format/Reset column widths to default" from the main portfolio menu.

The following options for filtering and formatting the information to be displayed are available by checking the appropriate items from the Format submenu.

Display all Sold securities will display all sold securities

Display all Unsold securities will display all unsold securities

Display all securities active in date range will display all those securities for which there has been some activity within the specified date range. If you select only this option then only those securities, where at least one transaction has occurred within the date range specified, will be displayed. The transaction can be a purchase/sale/dividend/renaming/merging etc.

Display tranches will display the number of remaining tranches (or parcels) for each security under the No of Units column - eg 10,000/4 means that a total of 10,000 units are held in four tranches.

Hide transactions closed before date range will allow you to suppress security, income and trade transactions, as displayed in their respective dialogs, that have been closed out before the start of the date range selected. This enables you to concentrate attention on the more recent ones.

Display Alarm securities Only will show only those securities where the alarms are currently activated.

Use Small font will compensate for large desktop fonts that prevent all information being seen on screen

Use Wide ListViews will increase the size of the fields by 25% in the portfolio ListView displays. This is useful if you have selected "Large fonts" on your desktop property options and the listview columns are not wide enough to display the data.

Reset Column Widths to Default restores the width of the columns of the table to the factory defaults

Colour Alarms enables you to colour the background of the rows of any alarmed securities bright red or green depending on whether the alarm below or alarm above has been hit.

Colour profit/loss foreground will colour the font in any row black if security is in profit or red if in loss. Parcels held for more than one year will be coloured blue in the Security Transaction dialog.

Colour profit/loss background will colour the background of the row in pale green if in profit or pale pink if in loss. Parcels held for more than one year will be coloured blue in the Security Transaction dialog.

Audible alarm status will enable or disable the audible alarm

Choose Risk Calculator method to use of the three methods available

Display stock changes as $ not % on the seventh column of the table

Display %p as % of total portfolio inc cash displays the percentage of each security in the securities list as a function of the total portfolio value including cash rather than as a function of the equities value alone.

Display %r as % of security value/holding cost calculates the $risk as a percentage of the individual security value rather than as a % of the total portfolio holding cost. If the “Stop Loss/Float” toggle button is set to Stop Loss then the $risk is the Stop Loss and the security value is the holding cost. If instead the “Stop Loss/Float” toggle button is set to Stop Float then the $risk is the Stop Float and the security value is the security current value. If this option is ticked then the status of the previous option above is irrelevant.

Suppress growth calculation speeds up the refreshing of the portfolio valuation by omitting repeated calculation of growth values.

Suppress portfolio rebuild is also activated by the Halt toolbar button and allows you to enter many transactions without recalculating between each entry.

Autofill trans/paydates for T+3 automatically sets Payment date 3 business days after the transaction date.

Display profits & income after marginal tax will show the various portfolio values as including the effects of taxation. The values displayed under this option should be regarded as only an indication as the calculation is carried out using a simplified calculation involving marginal tax rates and discount factors for capital gains.

You can chart directly from the Portfolio Manager by ticking the menu item **Format/**

Chart current ticker in charting window causes the portfolio window to be reduced in size and positioned to the left allowing you to chart directly from the Portfolio Manager by clicking the row for a particular security.

Encrypt sensitive documents allows you to encrypt any documents that you drag on to the portfolio manager dialogs for storage. It requires Winzip to have been previously installed.

Checking **Display all Sold securities** and **Display all Unsold securities** together will display all securities. Combining **Display all Unsold securities** with **Display all securities active in date range** is very useful in that it displays all securities for which there has been activity during the period plus any other securities which are still held at the end of the period even though they may not have had any activity within the period.

Where a data file is not available for valuation of a security in the Portfolio Manager, the relevant row will be highlighted in yellow on the main summary screen. In this case the latest price will be taken as zero. If the data file is present and its latest price is actually zero then it will also be highlighted in yellow.

The **Chart securities** or the X in the top right hand corner of the main portfolio window will hide the portfolio manager and take you back to the charting functions of the program. The **Exit** button on the main portfolio toolbar will exit the program entirely.

Setting the Date range

By default the date range displays from the first record in your portfolio to the current date. You can change the date range for the portfolio summary and the three transaction forms to limit it to say the previous financial year. The date range you set also determines the date ranges for the printed reports.

If you wish to set it for a particular financial year then you can very quickly select the appropriate dates from the drop down listbox to cover the financial year of interest. Otherwise set the **Start date** and **End date,** independently, to what you require and then do not forget to press **Accept dates** or hit the **ENTER key** otherwise the changes will not be applied. These will remain in place until you alter them again. Pressing **Reset dates** will reset the date range to the default covering the entire portfolio.

It is important to understand that you must not add any transactions or edit any transactions with dates outside the current date range. This is important because if the date of the transaction is out of the current date range it will not be visible in the listings. Consequently you may not think that it has been accepted and you could enter it again leading to the transaction being duplicated. If you attempt to do this you will be warned by the program.

The start date for each individual portfolio is saved within the portfolio file so the next time that the portfolio is loaded it will display with that starting date. However, the end date is not saved but it will revert to the current date to avoid problems where additional current

transactions might be added which would otherwise not be visible. You can, at any time, reset the date range to be the full date range from the date of the earliest record to the current date by pressing the Reset button on the main portfolio window.

Stop Loss

In the listing of all securities there is a column for the **Stop price** and the **Stop loss**. The stop price is the price you have decided that if the security price drops to this level then you will exit that position. The stop loss for each security is the amount you would lose if your stop was hit and you exited the position at that price through your default broker. (Slippage may increase the actual loss incurred.) Negative values indicate that you have moved your stop up since purchase and that if stopped out you would exit with a profit. In this case you might now consider it to be a "protect profit" stop. The **Total stop loss** is the sum of the stop losses for all individual securities and is displayed, in both dollars and as a percentage, above under the **Total portfolio value**. This is the amount you would lose (or if negative would be your profit) if you were to exit all your positions at their stop prices through your default broker.

Stop loss levels are entered in the **Alarm below** box in the F2 Notepad discussed in greater detail under *Risk Calculator* later in the chapter. Alarms are activated either on the last (or close) price or on high and low depending on whether, in the F2 Notepad, the **Alarm on close** check box has been ticked or not.

Stop Loss - Stop Float

"Stop Loss" we take to mean the difference in value between what you paid for a stock (or portfolio of stocks), including transaction costs, and what you would receive, after transaction costs, if you sold out the securities at their stop price levels.

"Stop Float" on the other hand we have defined to be the difference in value between what your securities are currently worth, after any notional disposal costs, and what you would receive, less any disposal costs if you sold out the securities at their stop price levels. It can be thought of as the amount by which the current value of the portfolio "floats" above its stop value and continuously changes with time.

At any time Stop Loss may be greater or less than Stop Float depending on whether prices have declined or risen since the purchases were made. The Stop Loss value changes only infrequently with time when the stop price changes while the Stop Float changes continuously as current prices fluctuate.

The main Portfolio Summary window shows the portfolio Total Stop Float value underneath that for the Total Stop Loss. In addition the Stop Loss values for individual securities listed in the table underneath can be toggled to Stop Float values instead by clicking the button on the Portfolio Summary screen "Show Stop Loss/Float".

Total Portfolio Stop Loss / Stop Float

The percentage risk for all securities combined - as a percentage of the securities value alone - is shown in brackets in the panel above against the Total Stop Loss and Total Stop Float.

The % figure for Total Stop Loss is based on the % of the total holding cost value for the portfolio. The % figure for Total Stop Float is based on the % of the total current securities value.

However, if "Format/Display %p %r as % of Total Portfolio inc cash" has been ticked then % Total Stop Loss is based on (total holding cost + cash) and % Total Stop Float is based on (total current securities value + cash).

Stop Loss / Stop Float for Individual Securities

The main Portfolio Summary screen has an additional column - %r (percent risk) - following the Stop Loss (/Stop Float) column that displays these dollar values for each security as percentages of either the total current portfolio value (excluding or including cash) or the value of the individual security itself.

That is the percent risk column (%r) following the Stop Loss (/ Stop Float) column can display the Stop Loss or the Stop Float dollar values for each company holding expressed as a percentage of the holding cost or the current value respectively of each individual **security** rather than those of the total **portfolio** itself. To do this you need to tick the option: "Format/Display %r as % of security value/holding cost".

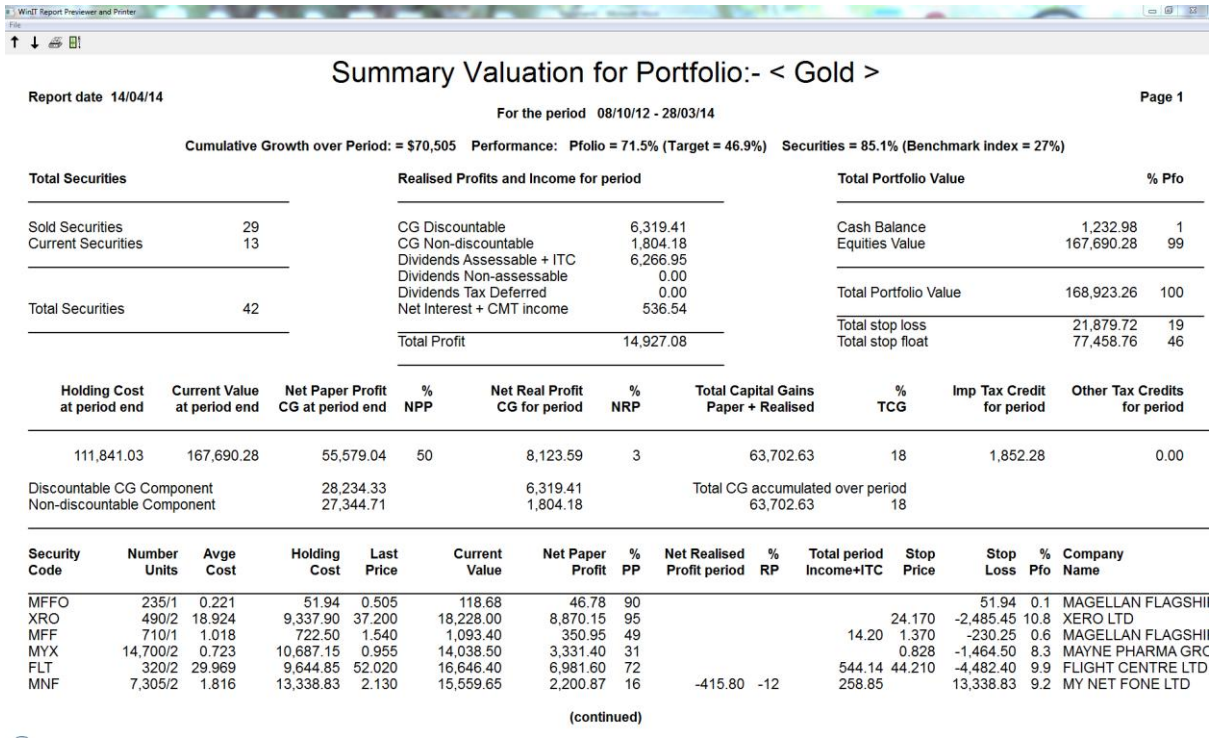
That is it will show either (Stop Loss/Holding Cost) or (Stop Float/Current Value).

If "Format/Display %r as % of security value/holding cost" is unticked while "Format/Display %p %r as % of Total Portfolio inc cash" has been ticked then % Stop Loss is based on (total holding cost + cash) and % Stop Float is based on (total current securities value + cash) as in the section above.

Printing Reports

There are nine basic reports that can be generated from within the Portfolio Manager. Some of these have the option to display both by individual security or by all securities.

Portfolio Summary Report



Summary Valuation for Portfolio:- < Gold >

Report date 14/04/14 — Page 1

For the period 08/10/12 - 28/03/14

Cumulative Growth over Period: = $70,505 Performance: Pfolio = 71.5% (Target = 46.9%) Securities = 85.1% (Benchmark index = 27%)

Total Securities		Realised Profits and Income for period		Total Portfolio Value		% Pfo
Sold Securities	29	CG Discountable	6,319.41	Cash Balance	1,232.98	1
Current Securities	13	CG Non-discountable	1,804.18	Equities Value	167,690.28	99
		Dividends Assessable + ITC	6,266.95			
		Dividends Non-assessable	0.00			
		Dividends Tax Deferred	0.00	Total Portfolio Value	168,923.26	100
Total Securities	42	Net Interest + CMT income	536.54			
				Total stop loss	21,879.72	19
		Total Profit	14,927.08	Total stop float	77,458.76	46

Holding Cost at period end	Current Value at period end	Net Paper Profit CG at period end	% NPP	Net Real Profit CG for period	% NRP	Total Capital Gains Paper + Realised	% TCG	Imp Tax Credit for period	Other Tax Credits for period
111,841.03	167,690.28	55,579.04	50	8,123.59	3	63,702.63	18	1,852.28	0.00
Discountable CG Component		28,234.33		6,319.41		Total CG accumulated over period			
Non-discountable Component		27,344.71		1,804.18		63,702.63	18		

Security Code	Number Units	Avge Cost	Holding Cost	Last Price	Current Value	Net Paper Profit	% PP	Net Realised Profit period	% RP	Total period Income+ITC	Stop Price	Stop Loss	% Pfo	Company Name
MFFO	235/1	0.221	51.94	0.505	118.68	46.78	90					51.94	0.1	MAGELLAN FLAGSHI
XRO	490/2	18.924	9,337.90	37.200	18,228.00	8,870.15	95				24.170	-2,485.45	10.8	XERO LTD
MFF	710/1	1.018	722.50	1.540	1,093.40	350.95	49			14.20	1.370	-230.25	0.6	MAGELLAN FLAGSHI
MYX	14,700/2	0.723	10,687.15	0.955	14,038.50	3,331.40	31				0.828	-1,464.50	8.3	MAYNE PHARMA GRC
FLT	320/2	29.969	9,644.85	52.020	16,646.40	6,981.60	72			544.14	44.210	-4,482.40	9.9	FLIGHT CENTRE LTD
MNF	7,305/2	1.816	13,338.83	2.130	15,559.65	2,200.87	16	-415.80	-12	258.85		13,338.83	9.2	MY NET FONE LTD

(continued)

Fig 10.10

The main portfolio summary can be printed from **Reports/Portfolio summary** on the main menu or by clicking toolbar button no 8 **Print Security Summary.** A preview screen will appear that can be perused by pressing the **PgUp** and **PgDn** keys, the up and down arrow buttons 1 and 2 on the toolbar of the preview screen or by rolling the mousewheel. Pressing the third toolbar button **Print report** will send the report to the printer. A tab delimited file of this summary - **pfolio.rpt -** is created in the WORKING\PFL folder. This file is suitable for importation into a spreadsheet program like Excel.

This report provides the information displayed on the main portfolio summary window.

Security Transaction Reports

You can get a report on security transactions for the currently selected security by choosing **Reports/Trans selected security.** If you want similar reports that include dividends or all transactions, but for all securities, then choose **Reports/Transactions all**.

There is also a **Print** button on the Security transaction form that will print this same report for the currently selected security.

Dividend and Income Reports

You can get a report on dividend and income transactions for the currently selected security by choosing **Reports/Div selected security.** If you want similar reports that include dividends and income for all securities, then choose **Reports/Dividends all – date order**.

For a date ordered report or **Reports/Dividends all – alpha order** for an alphabetically ordered report.

There is also a **Print** button on the Income transactions form that will print this same report for the currently selected security.

Account Transaction Reports

An **Accounts statement** is available from the **Reports** submenu for any of your accounts. Selecting this option will bring up the Accounts transaction form that we saw above and by selecting the account you require from the drop down list and pressing the **Print** button on the form the preview window will appear with the report for the chosen account. This report can be printed by clicking the third toolbar button **Print**.

Capital Gains Report

For each parcel of each security this report lists the disposal transaction and its disposal proceeds amount together with the disposal costs. Directly below is shown the original number of units in the first transaction that resulted in the acquisition of the parcel - portion (or all) of which has been disposed of in the line above. The acquisition costs, adjusted according to the historical events affecting the whole parcel, have been apportioned depending on the disposed proportion of the complete parcel. The first transaction referred to above could have been the purchase or acquisition of options that were later exercised but more usually it will just be a simple purchase.

Days held and Capital Gain or Loss are indicated in the last two columns. The summary at the end accumulates Capital Gains which are discountable (held more than 1 year) and non-discountable (held less than 1 year) and Capital Losses.

This report can be done by security (**Capital gains by security**) or accumulated into a single report for all securities (**Capital gains report all**).

Traders Closing Stock Report

This report gives valuations of stock at the beginning and end of a specified period based on:

1) Current value or on

2) Original cost of the units (excludes tax and charges)

Accessed from **Traders closing stock**.

Traders Sales and Costs Report

This option provides a summary of Sales and Costs of Sales that have occurred in a given period (eg a financial year) and includes capital contributions in and out. The report can be done by security or accumulated into a single report for all securities.

Accessed from **Sales and costs by security** or **Traders sales and costs** respectively.

Miscellaneous Income and Expenses Report

This report summarises other income and expenditure including interest, cash management trust income and expenses, GST, bank fees, other tax and income.

Accessed from **Miscell income and expenses**.

Profitability of Trades Report

Profitability of Trades lists all individual trades - either closed within the specified period or still held open at the end of the period. Measures given include Net Profit (after buy and sell fees), % net profit; days held and % Annualised Growth Rate.

The definition of Annualised Growth Rate is similar to that given for the total portfolio (as explained at the end of this chapter) but is simpler in that only the net capital growth for a single security needs to be calculated. The % Annualised Growth Rate is also shown withing the listing for individual trades in the Security Transactions Dialog.

Accessed from **Profitability of Trades.**

Portfolio Statistics

This report provides important performance statistics on your portfolio for both investors and traders alike:

Total numbers of trades, average trades per month, average days held, number of securities, average additional securities per month,

Number of wins, number of losses, percentage wins, average win, average loss, average net gain, win/loss ratio, total win/total losses ratio, Expectancy,

Portfolio growth rate (% pa compounding), current % drawdown, average % drawdown, maximum % drawdown, MAR ratio, VAR ratio, average % exposure.

For the final group you must have a current portfolio equity curve file already generated.

Values are shown for two separate cases. The first includes trades that have been closed within the date range currently set for the portfolio as well as those still open at the end. The second case includes only the trades closed within this period and ignores those still open.

List of Registered Brokers

The list of details for the registered brokers can be printed from the **Print** button on the form for the registered brokers.

List of Registered Accounts

The list of details for all the registered accounts can be printed from the **Print** button on the form for the registered accounts.

Printing Batches of Reports

It is usual for users to print out only a selection of the available reports and this selection may not change much over time. From the main menu, clicking **Reports/Print report batch** will allow you to select those reports that you wish to print without having to manually process each one individually. Your selection is saved and will appear again next time you choose this option. Either click **Close** to exit the dialog after making your selection or **Print** to print all reports requested. Make sure that you have chosen a suitable **Start date** and **End date** on the main portfolio summary before commencing printing a large number of reports.

Selecting **Accounts** from this dialog will print out reports only for those accounts that have had transactions in that portfolio.

Exporting Reports to Other Programs

Whenever a report is displayed on screen an appropriately named CSV file of that report is generated and stored in the EXPORT sub folder of the WORKING folder off the main WINIT program folder. This file is in a suitable format for importing into spreadsheet programs such as Excel.

Exporting Selected Columns from Portfolio Summary and Accounts to Excel

Portfolio Summary

You can export to Excel selected columns from the Portfolio Summary listing. You can choose any number of columns in any order that you wish and you can choose to include or exclude the column headings. The default is to export all columns in order together with headings.

If you wish to customise the columns to be exported select "Edit/Configure Summary CSV export" from the main portfolio menu and follow the prompts.

To generate this file you just need to press the Print button on the main toolbar to create it. If you do not want a printed report as well then just back out of the print preview screen that appears. The file will appear in the "WORKING\EXPORT" folder as PfolioSummaryLV.CSV that can be directly imported into Excel.

Account Summaries

The account transactions corresponding to your bank statements can similarly be exported using the print button on that dialog box with the file name AccountLV.csv. Any transactions

that are checked will be indicated by a "#" character preceding the first column. These checks are used to assist in reconciling your portfolio accounts with your bank statements.

If you wish to customise the columns to be exported select "Edit/Configure Account CSV export" from the main portfolio menu and follow the prompts.

Automatically Importing Transaction Lists from Brokers

You can import, into your portfolio, transactions listed in a CSV file that you can download from your broker. Specifically you can automatically import BUY transactions from such a CSV file into a new or existing portfolio. This can be achieved under "File/Import transactions" from the main Portfolio menu.

This facility is particularly useful when starting from scratch to enter into the Portfolio Manager a portfolio that may have been in existence for many years. For example, decades of transactions can be imported within a few seconds, without typographical errors, that would have otherwise taken many hours to enter manually.

Unfortunately there is a conceptual problem with SELL transactions in that any one Sell transaction needs to be linked specifically to one or more individual BUY transaction parcels. This is a matter of arbitrary choice for the user and cannot really be done automatically. Furthermore a list of BUY and SELL transactions from your broker only provides part of the total holdings for any one security. Therefore the list of transactions for any one security may include SELL orders for more units than the total units available from the BUY orders in the list. This situation can arise as a result of there being more units actually held than would be indicated just by the sum of the number of bought units listed in the broker file. Examples of such additional unlisted acquisition transactions that will never appear on your broker's list include the following:

- IPOs
- Exercising of rights entitlements
- Exercising of options/warrants
- Dividend reinvestment
- Splits
- Reconstructions
- Merging Code changes
- Final payments on Calls (leading to code change from say TLSCA to TLS)

The CSV file must have the same format as the transactions CSV file "contractnote.csv" downloadable from the Commsec site:

Contract Number, Trade Date, Buy / Sell, Stock Code, Units, Average Price, Brokerage, Net Proceeds, Settlement Date, Contract Status

eg:

48120000 ,21/12/2014 ,B ,XYZ ,16000 ,4.920000 ,78.720000 ,78798.720000 , 24/12/2014 ,Confirmed

If you are using a file from another broker with a different format then you can massage the data in the columns of that file to conform to the Commsec format above. Also note that the Commsec format consists of two header lines that are ignored during the import process so if you are using a file other than one from the Commsec site then ensure that two dummy lines exist at the top of the file before the actual transactions start. Furthermore the Commsec generated files have the most recent transactions at the top ie in descending date order. However, this does not need to be changed if the records are listed instead in ascending date order as the program will allow you to specify the actual order during the import process.

To import transactions from a CSV file the process is as follows:

1) Back up an existing portfolio if this is the one you wish to import into. (This safeguards against any unforeseen problems arising)

2) If necessary massage the file to conform to the Commsec standard outlined above if the file is not directly from the Commsec site.

3) Delete any transactions from the file that may have already been entered into the portfolio to avoid duplications. Sale transactions can remain in the file as they are ignored.

4) Place the file into the WINIT folder.

5) Select "File/Import transactions" from the main menu

6) Enter the File name eg "contractnote.csv"

7) Enter the number of the relevant Broker from the portfolio file

8) Enter the number of the relevant Account from the portfolio file

9) Click OK

10) Then specify whether the dates of the transactions listed in the file are in ascending or descending order.

After the BUY transactions have been imported then other transactions such as the SELL transactions and any of the non-listed acquisition transactions specified above should be entered manually in the date order in which they occurred.

Finally non-security account based transactions like interest received, bank fees, expenses, inter-account transfers etc should be entered into the Account Transactions dialog.

How to Enter Some Common Transactions

The following are a number of common transactions together with a list of step by step instructions on how to enter them. For this purpose you will need to access either the Security Transaction form (toolbar button number 3 for a security not yet registered in the portfolio or toolbar button number 5 otherwise) or the Income Transaction form (toolbar button number 6) or both. Alternatively, double **Left Click** on the security required in the listing to invoke the Security Transaction form or a single **Right Click** to bring up the Income Transaction form.

IMPORTANT

The instructions below are intended as a general guide only. The precise method by which each of your transactions should be entered could depend on your individual circumstances and whether there have been any changes in tax regulations. We recommend that you consult your accountant or licensed tax advisor for definitive guidance in this process.

Entering dates for the transactions listed below

As discussed in the previous section *Use of the Account <suspense account>* you can either use a single date system by completing only the transaction date field and leaving the payment date field blank or you can utilise both fields. If you are using the dual date system the transaction date for dividends, capital returns and call payments is the **exdate** on which the securities change value. The payment date is the date on which the transfer of funds is recorded in your bank account. For purchases and sales the payment date "T+3" is usually three working days after the transaction date.

1. Purchasing the first parcel of a new security

As we have seen in the example above you should invoke the Security Transaction form by pressing toolbar button number 3 and enter the required information. Then press the **Add Transaction** button and this security code will be registered in the current portfolio and the purchase transaction will be recorded in the list box at the bottom of the form.

2. Purchasing a subsequent parcel of a security

As this security will already be registered in your portfolio you should first select the relevant security in the listing below and then invoke the Security Transaction form by pressing toolbar button number 5. Simply double clicking on the security achieves the same result. Then enter the required information. Press the **Add Transaction** button and the purchase transaction will be recorded in the list below.

3. Receiving shares from a demutualised company

Where a company demutualises you can receive shares for no payment. However, for taxation purposes you are deemed to have purchased them at a price set by the Taxation

Office. You must therefore enter them into your portfolio as a purchase at the deemed price. Since the security has only just come into existence you will need to enter the information as described in 1. above. However, choose the **Account** as **<no account>** since there is no physical transfer of funds and the **Trans date** as the deemed date of acquisition.

4. Bonus issues of shares of the same security

From the Security Transaction form choose **Bonus share issue** from the Transaction Type drop down box. Enter the **Trans date** and the **No of units** received.

When the portfolio is accumulated these bonus shares will be apportioned amongst those parcels entitled to participate to increase their available units because the acquisition dates of the new bonus shares are assumed to be the same as the original share parcels that generated them.

5. Bonus issues of shares in another company (in specie)

These are handled as a purchase of new securities and they are therefore entered as in 1. or 2. above. The purchase price will be either zero or as deemed and the acquisition date is as deemed. This information can usually be obtained from the company or sometimes from the Taxation Office

6. Bonus issues of rights or options

Where rights or options are given for no payment they are deemed to have the same date of acquisition of the original shares that generated them. They are entered as purchases as in 1. or 2. above at no cost.

You should enter a transaction date that is the same as the date of acquisition of the original parcel of shares that generated the options. Since several original parcels may be involved with different acquisition dates then the acquisition transaction of the options might have to be entered as a number of separate transactions corresponding to the number of original parcels each with a different transaction date**.**

7. Purchased rights or options

Where rights or options are purchased their date of acquisition is taken as the purchase date. They are entered as normal security purchases as in 1. or 2. above at the price paid.

8. Dividend reinvestment

A dividend reinvestment is considered as a receipt of a dividend followed by a purchase of the securities at the specified dividend reinvestment price.

Dividend reinvestment is entered via the Income Transaction dialog by putting a tick in the **Divd Reinv** checkbox. You will note that the account automatically changes to **<no account>** and is greyed. Fill in the appropriate information for the dividend and then click OK.

The Securities Transaction dialog will then be thrown up with much of the relevant data already entered. Complete the information including the number of shares allotted and the price per unit before accepting with **Add transaction**.

The resulting share purchase is linked back to the income transaction which is automatically deleted if the securities purchase transaction is deleted.

9. Making a call or instalment payment on contributing shares

In the Security Transaction form choose **Call/additional payment** from the **Transaction Type** drop down list. The number of available units will appear in the **No of units** box. If necessary change this to the number of units to which the call will apply and enter the call payment per share in the **Price per unit** box. Fill the **Trans date**, and **Total paid** and any other boxes you wish. Then press **Add Transaction** to record the transaction.

When the portfolio is accumulated the additional payment will be apportioned amongst those parcels required to participate and will increase the amount listed in the **+Capital** column at the bottom of the form. The acquisition date of the shares is taken to be the date of their original purchase but the call payments are indexed from the date of the call payment if indexation is chosen as the method for calculating the cost base.

When the final call payment is made the shares become fully paid and change their codes and names to reflect this fact. Both TLSCA and TLSCB became TLS. Their names and codes must be changed to reflect this and should be carried out as a Merger as described in 13. below.

10. Receiving a capital return

In the Security Transaction form choose **Return of capital** from the Transaction Type drop down list. The number of available units will appear in the **No of units** box. If necessary change this to the number of units to which the capital return will apply and enter the capital return payment per share in the **Price per unit** box. Fill the **Trans date**, and **Total paid** and any other boxes you wish. Then press **Add Transaction** to record the transaction.

When the portfolio is accumulated the return of capital will be apportioned amongst those parcels required to participate and will decrease the amount listed in the **+Capital** column at the bottom of the form. The acquisition date of the shares is taken to be the date of their original purchase but the return of capital is indexed from the date of the capital repayment if indexation is chosen as the method for calculating the cost base.

11. Short Selling

To short sell a security that you do not own then you should enter a purchase transaction of a negative number of units. To cover your short sale you should select that negative parcel and then click the appropriate sell button.

12. Receiving Dividends

In the Income Transaction form enter the **Date** for the dividend and check that the **Broker** and **Account** are correct. The number of available units presented in the **units** box can be edited if required. Enter the rate per unit for the dividend and the total dividend will automatically appear in its box but this can also be edited if it needs to be modified.

If the dividend is totally **Franked** or totally **Unfranked** click the **T** button next to the appropriate box and the total will be transferred to this location. If it is partially franked then type the partial amount into one of the boxes and then simply click in the other box to automatically insert the difference between the total and this value. Similarly, clicking in the **Imp tax credit** box will automatically calculate the imputed tax credit using the **Franking rate** shown. If any **Withholding tax** has been taken from the dividends received this amount can be entered in the appropriate box. Click the **Add** button to append the dividend transaction to the list at the bottom of the form.

A similar procedure is used for entering distributions from trusts and funds and foreign income in the boxes corresponding to them.

13. Adjusting for a reconstruction – split or consolidation

From the Security Transaction form choose the **Reconstruction** button at the base of the form. A box will appear in which you will enter the last date for the reconstruction and the total number of shares before reconstruction and the total number of shares you hold after the reconstruction. These numbers should only be from the parcels that are participating in the reconstruction.

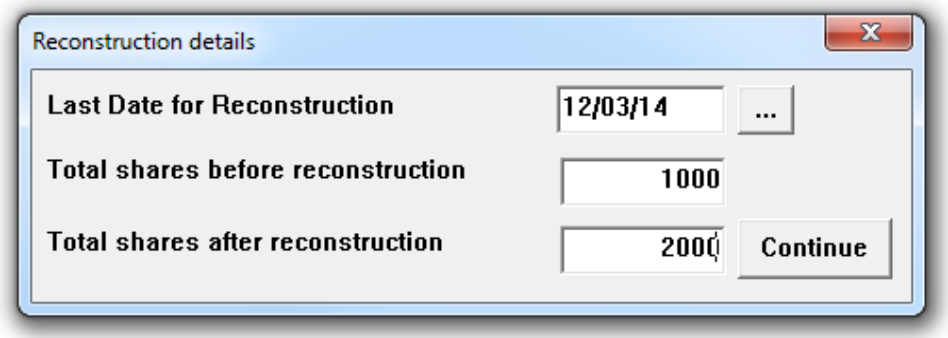


Fig 10.11

Adj by reconstruction will appear automatically in the Transaction Type dropdown list and the **Transaction date** will be completed and the extra units or deficit of units will appear under **No of units**. Then press **Add Transaction** to record the transaction.

When the portfolio is accumulated these additional shares or deficit of shares will be apportioned amongst those parcels participating in the reconstruction to change the number of their available units. The acquisition dates of any new shares are assumed to be the same as those of the original share parcels that participated in the reconstruction.

14. Merging companies by scrip for scrip rollover

From the Security Transaction form choose the **Merge** button at the base of the form. A box will appear in which you will enter the date for the merger, the ASX code of the parent company and the total number of shares you have been issued in the parent company as a result of the merger. This form should only be used for mergers that are entitled to scrip for scrip rollovers.

Upon acceptance an **Exchanged by rollover** – **E** transaction will appear in the list at the bottom of the Security Transaction form and if you did not have the parent company previously registered in your portfolio a new record for the parent company will appear in the list of the Portfolio main window. Accessing its security transaction form will reveal a **Merger R/O acquisition** – **M** transaction has been generated by the system.

The acquisition dates for the new units are assumed to be the same as those of the original share parcels that participated in the rollover.

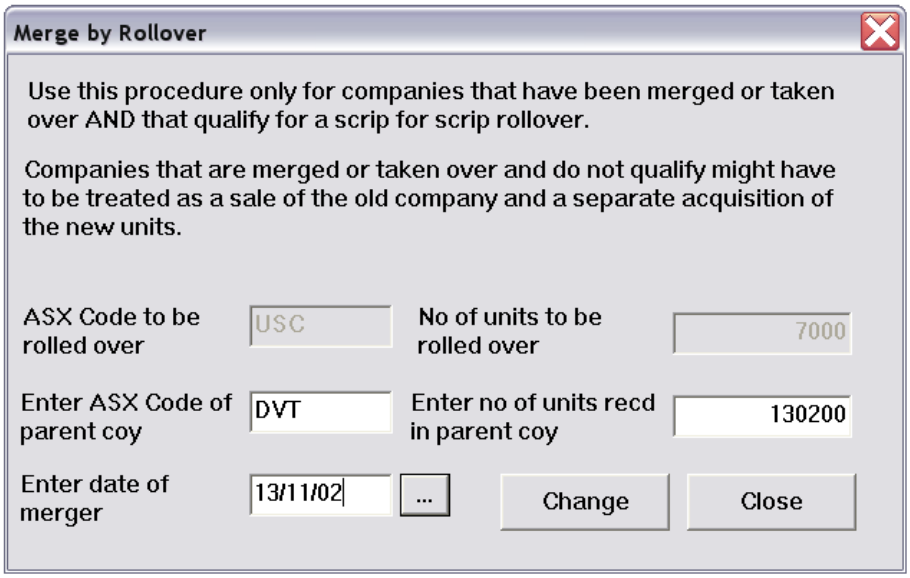

Merge by Rollover
Use this procedure only for companies that have been merged or taken over AND that qualify for a scrip for scrip rollover.
Companies that are merged or taken over and do not qualify might have to be treated as a sale of the old company and a separate acquisition of the new units.
ASX Code to be rolled over
USC
No of units to be rolled over
7000
Enter ASX Code of parent coy
DVT
Enter no of units recd in parent coy
130200
Enter date of merger
13/11/02
...
Change
Close

Fig 10.12

15. Demerging of securities

Demerging of companies involves the splitting of one company into two or more entities. The spinoff or offspring company takes a certain percentage of the value of the original company leaving the parent company with the remainder. The demerger procedure followed from using this form assumes that the demerger has been granted rollover relief allowing you

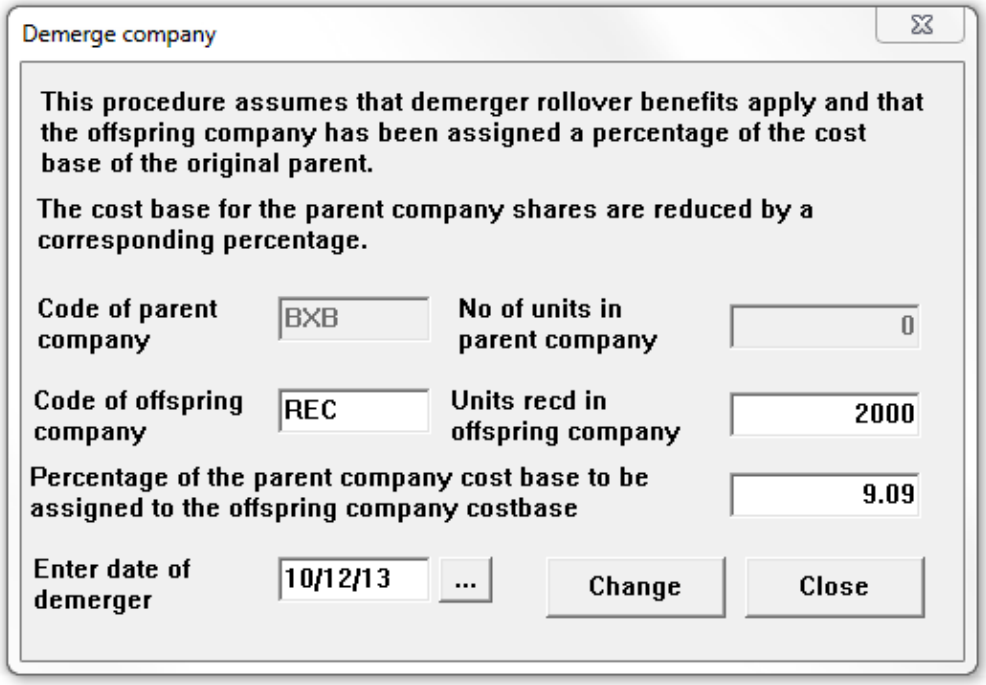

Demerge company
This procedure assumes that demerger rollover benefits apply and that the offspring company has been assigned a percentage of the cost base of the original parent.
The cost base for the parent company shares are reduced by a corresponding percentage.
Code of parent company
BXB
No of units in parent company
0
Code of offspring company
REC
Units recd in offspring company
2000
Percentage of the parent company cost base to be assigned to the offspring company costbase
9.09
Enter date of demerger
10/12/13
...
Change
Close

Fig 10.13

to defer your CGT obligation until a later CGT event happens to your original or your new shares or units.

Enter in the boxes provided the code of the offspring company, the total number of units you have received in it, the percentage of the cost base of the parent company that will be assigned to the offspring company and the date of the demerger.

Pressing **Change** will cause the system to generate in the original company an Unwind R/O demerge transaction **U** and an Offspring demerge acquisition transaction **O** in the new company.

16. Change of Name

A change of company code and name is performed from the SecurityTransaction form. There are two ways of doing this. In the first method click the **Change name** button at the bottom of the form and the name change will be performed as though it was a separate transaction involving a merging or rollover of the old company code into the new company code as in 12 above. The advantage of this method is that it will not involve any irreversible changes in your security file by avoiding modifications to any of the previous transactions. This maintains the integrity of the portfolio as an accumulation of independent historical transactions. However, any completed transactions prior to the name change will be retained

under the old name and code. Any remaining parcels will have their names and codes changed to the new ones. To enable valuations of the portfolio for past dates you must retain

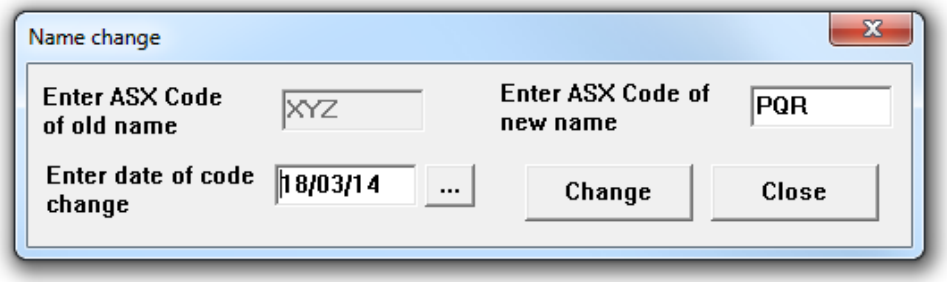


Fig 10.14

the appropriate old files in your database under the old codes. Enter the new code and date of the change and press the **Change** button and the system will generate a Ticker change disposal transaction **T** under the original code and a Name change acquisition transaction **N** under the new code.

The alternative way to change the name and code is to access the button to the right of **Ticker symbol** in the Security Transaction form. Just type in the new code and any previous security transactions in the portfolio involving the old code will have their code changed to the new ticker. This is the only operation in the Portfolio Manager that may be irreversible. It is not recommended that you use this method except for very specialised applications such as when the ASX reuses a code and you have to rename the original to something different in all previous transactions

17. Selling a single parcel

From the Security Transaction form select the parcel you wish to sell from the list and then click the **Sell Parcel(s)** button. The total number of available units in the parcel will be automatically displayed in the **No of units** box. (If you have checked **Format/Colour profit/loss** on the main menu then any parcels you have held for over a year will be coloured blue.) If you do not wish to sell the whole parcel then you may edit this to be less than the number shown. Fill in the remainder of the information relevant to the sale and click the **Sell Parcel(s)** button. The sale transaction **S** will appear in the list at the bottom of the form.

If you had only sold part of the parcel then the available units for that parcel would have been reduced to the number remaining after the sale..

18. Selling several parcels of the same security

If you wish to sell more than one parcel in the one transaction then in the Security Transaction form select all the parcels you wish to sell by holding the **Ctrl** key down while clicking on each of the parcels in the list that you wish to sell. (If you have checked **Format/Colour profit/loss** on the main menu then any parcels you have held for over a year will be coloured blue.) Then click the **Sell Parcel(s)** button and enter the information relevant to the sale in the form. The number of units shown will be the total available units in all the parcels selected and if you wish to sell fewer units than shown there then edit the number to reflect this.

When you press the **Sell Parcel(s)** button again to register the sale you will be asked, if you have selected fewer than the total number available, whether you wish to sell on a first in first out basis (FIFO) rather than a last in first out basis (LIFO) or whether you wish to sell a prorate number of units from each parcel.

The appropriate number of sale transactions will appear in the list below and if fewer than the total available have been sold the available units after the sale will be reduced to the number remaining after the sale. The total sale costs will be apportioned over all parcels sold.

19. Selling all parcels of the same security

If you wish to sell all available parcels in the one transaction then in the Security Transaction form click the **Sell All Parcels** button before entering the remaining information relevant to the sale in the form. The number of units shown will be the total available units in the portfolio and this is greyed and cannot be edited.

After pressing the **Sell All Parcels** button again to register the sale you will see the appropriate number of sale transactions appear in the list below. The total available units for all parcels sold will be displayed as zero. The total sale costs will be apportioned over all parcels sold.

20. Exercising a single parcel of rights or options

To exercise options or rights open the Security Transaction form and select **Xercise Options** from the Transaction Type drop down list. This action will cause buttons to display **Exs Parcel(s)** and **Excs All Parcels**.

From the Security Transaction form select the parcel you wish to exercise from the list and then click the **Excs Parcel(s)** button. The total number of available units in the parcel will be automatically displayed in the **No of units** box. If you do not wish to exercise the whole parcel then you may edit this to be less than the number shown. Fill in the remainder of the information relevant to the transaction and click the **Excs Parcel(s)** button again. The exercise transaction **X** will appear in the list at the bottom of the form.

If you exercise only part of the parcel then the available units for this parcel will be reduced to the number remaining after the exercising.

21. Exercising several parcels of rights or options

To exercise options or rights open the Security Transaction form and select **Xercise Options** from the Transaction Type drop down list. This action will cause buttons to display **Exs Parcel(s)** and **Excs All Parcels**.

To exercise more than one parcel in the one transaction then in the Security Transaction form select all the parcels you wish to sell by holding the **Ctrl** key down while clicking on each of the parcels in the list that you wish to exercise. Then click the **Excs Parcel(s)** button and enter into the form the information relevant to the transaction. The number of units shown

will be the total available units in the parcels selected and if you wish to exercise fewer units than shown then edit the number to reflect this.

When you press the **Excs Parcel(s)** button again to register the transaction you will be asked, if you have selected fewer than the total number available, whether you wish to exercise on a first in first out basis (FIFO) rather than a last in first out basis (LIFO) or whether you wish to exercise a prorate number of units from each parcel.

The appropriate number of exercise transactions **X** will appear in the list below and if fewer than the total available have been exercised the available units for the final parcel will be reduced to the number remaining after the exercising. A further transaction **From exercised options - F** is generated by the system for the shares acquired as a result of the exercise. This can be viewed in the Security Transaction form after selecting the code for that security.

The total exercise costs will be apportioned over all parcels exercised.

22. Exercising all parcels of rights or options

To exercise options or rights open the Security Transaction form and select **Xercise Options** from the Transaction Type drop down list. This action will cause buttons to display **Exs Parcel(s)** and **Excs All Parcels**.

If you wish to exercise all available parcels in the one transaction then in the Security Transaction form click the **Excs All Parcels** button before entering the remaining information relevant to the transaction in the form. The number of units shown will be the total available units in the portfolio and this is greyed and cannot be edited.

After pressing the **Excs All Parcels** button again to register the transaction you will see the appropriate number of exercise transactions X appear in the list below. The total available units for all parcels exercised will be displayed as zero. A further transaction **From exercised options - F** is generated by the system for the shares acquired as a result of the exercise. This can be viewed in the Security Transaction form after selecting the code for that security.

The total exercise costs will be apportioned over all parcels exercised.

23. Stapling of Securities

Because of the complex nature of stapled securities you should seek advice from a professional appropriately licensed to provide any accounting and taxation guidance you may require. The notes under this section are provided only as a very general indication as to the manner in which certain transactions might be handled in the Portfolio Manager if specific circumstances apply.

In recent years it has become popular to “staple” together securities of different types eg ordinary shares, trusts and other security types. Although each component still retains its identity there is no explicit valuation that is easily obtainable for these individual components as only the combined entity trades as a listed unit.

However, it is necessary to continually track each component security into the future as far as its cost base is concerned and on sale consider it as a sale of separate component securities.

Because ongoing valuations for the individual component securities will not be available the combined total for the stapled entity will need to be tracked in addition to the cost bases of the components.

Although it is not possible to give a general indication for all stapled securities for all investors it is possible that under some circumstances it might be possible to handle the portfolio transactions for the process of stapling as follows:

Since there can be no valuations available for the individual components, all valuation would be attributed to the combined stapled entity S and all costs and capital changes attributed to the individual components say A, B and C. The capital profits would be calculated from combining the **value** of the stapled entity S with the **costs** and **capital changes** of the components A, B and C.

Information might be entered into the portfolio manager as follows:

a) Appropriate transactions would be entered for the acquisition of the stapled entity S from one or more of the component entities A, B and C if any of these were held at the time of stapling. If instead the securities S were bought as already stapled units on the market then all acquisition costs would have to be apportioned between the individual components A, B and C only - according to the guidelines provided by the tax office. (For example, the apportionment might be done on the basis of their respective net tangible assets) In neither case are acquisition costs to be attributed to the stapled securities S. Purchase or acquisition transactions for A, B and C where required would need to be entered.

b) The required number of stapled entity units would then be purchased at zero cost from <no account>.

c) If data files exist in the database for A, B and C they would need to be edited to enter a value of zero price on the exdate for stapling so that no value will be attached to them during any subsequent portfolio valuations.

This would allow all costs to be attributed to the components A, B and C and all value attributed to the stapled entity S for any portfolio valuations that may be done.

On sale the appropriate number of stapled securities S would be sold at zero price (making zero gain on the combined entity S) and the same number of each of the component securities A, B and C would be sold - apportioning the proceeds amongst these components according to the guidelines from the tax office.

Tips on entering a long term portfolio

If you are entering from scratch many transactions for a portfolio that you may have held for a long period of time then the tax rates and brokerage rates may have varied at least once over that period. It is therefore more efficient to modify the tax rates in the portfolio from the **Format/Set Portfolio tax rates** as explained above whenever they change while inputting a long historical sequence of transactions rather than continually modifying the number that automatically appears on the transaction form.

You should also save a rotating set of backups of the portfolio file at frequent stages in its construction in the manner discussed later under *Backing up your portfolio.*

Editing and Deleting Transactions

Transactions may be edited or deleted. However, care must be taken when changing information within a security transaction in the Security Transaction form so that internal inconsistencies are not introduced into the portfolio. Therefore there are checks on editing or deletion of transactions that determine whether there are other transactions that depend on the ones you are attempting to edit or delete However, it is usually quite safe to edit purely informational fields such as Company name, Notes, Contract no or Expiry Date. Other fields such as Broker and Account can usually be altered quite safely. In other cases it is safer to delete security transactions you wish to modify and then re-enter the information to ensure that any internally generated transactions are regenerated to be internally consistent with the new information.

Transactions within the Account Transaction and Income Transaction forms on the other hand can usually be edited quite safely.

To edit any particular transaction, access the relevant transaction form and highlight the particular transaction to edit. Then press the **Edit** button. (Alternatively, simply double clicking on the transaction required will take you straight to edit mode) When you have finished modifying the transaction press the same button again (that has now been renamed **Accept**) to accept the changes.

You can also delete all records for a particular security from the main portfolio window by pressing toolbar button number 4. This should only be done for securities that are not linked in any way to other securities within the portfolio.

It is possible to turn off the internal checking of editing and deletion by accessing the option from the main menu under **Edit/Allow unrestricted editing**. This will enable you to do almost anything with any record. However, before you make any such changes to your portfolio under these conditions you should back it up using **File/Backup portfolio** from the main menu or preferably by making a backup of it on a removable disk or CD. You should also switch this option back immediately you have completed the unrestricted editing.

It is important to remember that you must not add any transactions or edit any transactions while the date range is set to other than the default covering the entire portfolio.

Other Features

General Formating

Under the **Format** submenu you can enable or disable the **Audible alarm status**,

Risk Calculator

The Risk Calculator is a utility to facilitate your money management requirements and is accessed from the main portfolio menu under **Utilities/Risk calculator** or by clicking toolbar button no 13. It is also accessible from the toolbar on the main charting window. This utility calculates the maximum number of shares of a particular security you can buy in order to limit your risk for that parcel to a specified percentage of the total value of the investable funds in a given account as well as several other criteria. It is based on the methods described by Colin Nicholson in his book *Building Wealth in the Stock Market* to be found in the Reading list at the end of this manual as well as in his previous writings.

The risk calculator takes account of up to four risk criteria that will limit the maximum size of the holding of any single stock viz:

1. Maximum % risk allowed on total capital arising from each holding
2. Limit on the maximum size of each holding as % of total capital
3. The liquidity risk holding limit (as a % of average daily turnover for that security)
4. The limit imposed by the remaining cash available

Maximum % Risk allowed on Total Capital from any Security

Three Schemes are available:

Three risk management schemes are provided as options in the Risk Calculator. The first method is based on the scheme published by Colin Nicholson in his books "The Aggressive Investor and "Building Wealth in the Stock market" while the second method was his original version which he published some years prior to the release of these books. The third method is in some senses an amalgamation of these two previous methods. The differences between the three options are in the price increment representing the risk per share arising from any existing units already purchased prior to the new units. This figure is necessary to enable calculation of the contribution to the total risk posed by any existing units.

In each method this price increment representing risk in existing units is given by:

For method 1:
currentprice - sellstopprice

For method 2:
MAXIMUM(averagepricepaid - sellstopprice,0)

For the method 3:
MAXIMUM(currentprice,averagepricepaid) – sellstopprice

In addition, for method 3, we need to specify the maximum allowable risk on the TOTAL portfolio rather than on each individual position as with the previous methods. If this is say 16% then for each parcel to be purchased the Calculator multiplies the maximum total allowable portfolio risk, say 16%, by the percentage position size say 2%, 4% or 6%. For example for a maximum position size of 6% we would have a total risk of 16% x 6% = 0.96%. An average position size of 6% would allow ~16 stocks to be purchased.

If it is desired to have say 32 stocks instead of 16 with the same total portfolio risk then the average position size will be ~3% which gives a total risk per position of 16% x 3% = 0.48%. That is, it adjusts automatically for different numbers of stocks and different position sizes.

To set the Risk Calculator Method you wish to use you can select from the main portfolio menu "Format/Choose Risk Calculator method to use".

If choosing method 3 you will need to specify the TOTAL portfolio percentage risk, say 8%, 16%, or whatever that you wish to employ against "Maximum % Risk to total capital from ALL positions" on the Risk Calculator dialog box. For the other methods it is the "Maximum % Risk to total capital from any SINGLE position". You will also have to set the parcel sizes eg say 2%, 4% and 6% or 1%, 2% and 3% or whatever to reflect the maximum number of stocks you anticipate will comprise the whole portfolio. Method 3 is now the default as it addresses certain issues arising from use of the other two methods.

Limit on Maximum size of any Holding

The maximum size of any holding is determined by the total portfolio value times the percentage limit that you have set for the particular parcel in question.

Liquidity Limit

The risk calculator enables you to include the risk posed by stocks with low average daily turnover and also by the actual cash balance available in your accounts that are used for purchases. You can set globally for all stocks the percentage of daily turnover that you do not wish to exceed for the total position in each stock. The default is 10% but if you set it to zero then the test for this limit is ignored.

Limit from the Remaining Cash available

The limit imposed by the cash available to purchase is taken automatically from your portfolio. If your cash balance is below zero it is assumed that you are not using the account facility and the test for this limit is ignored.

IMPORTANT:

This calculation excludes the additional costs associated with brokerage, charges, tax and slippage. These will have the effect of increasing the risk levels above the nominal values calculated. Note that this calculator is only applicable to long trades.

First select the security of interest from the list on the main window of the Portfolio Manager. If it is not there already just select any one that is in the list and we can change the security code later.

Before the Risk Calculator can be used for any security we need to have entered a stop loss price for the security in question in the **Alarm below** box of the F2 notepad – button 9 of the toolbar. If you have not done so you will be prompted later when you attempt to access the calculator. If your database is in cents rather than dollars you will have to enter this value in cents ie 835 rather than 8.35. The F2 notepad manages the alarms on your charts which display in either cents or dollars depending on how your database is kept. The portfolio manager itself operates entirely in dollars.

You should now access the Risk Calculator through the main portfolio menu Utilities/Risk Calculator or click the button on the main toolbar. On the dialog that appears, the Account size will already be filled in with the total value of the portfolio in question.

You should next specify a value for **Maximum % risk of total capital per trade** or leave it at the default of 1%. If you are using Method 3 it is you will need to specify a value for **Maximum % risk of total capital from all positions** or leave it at the default of 16%.

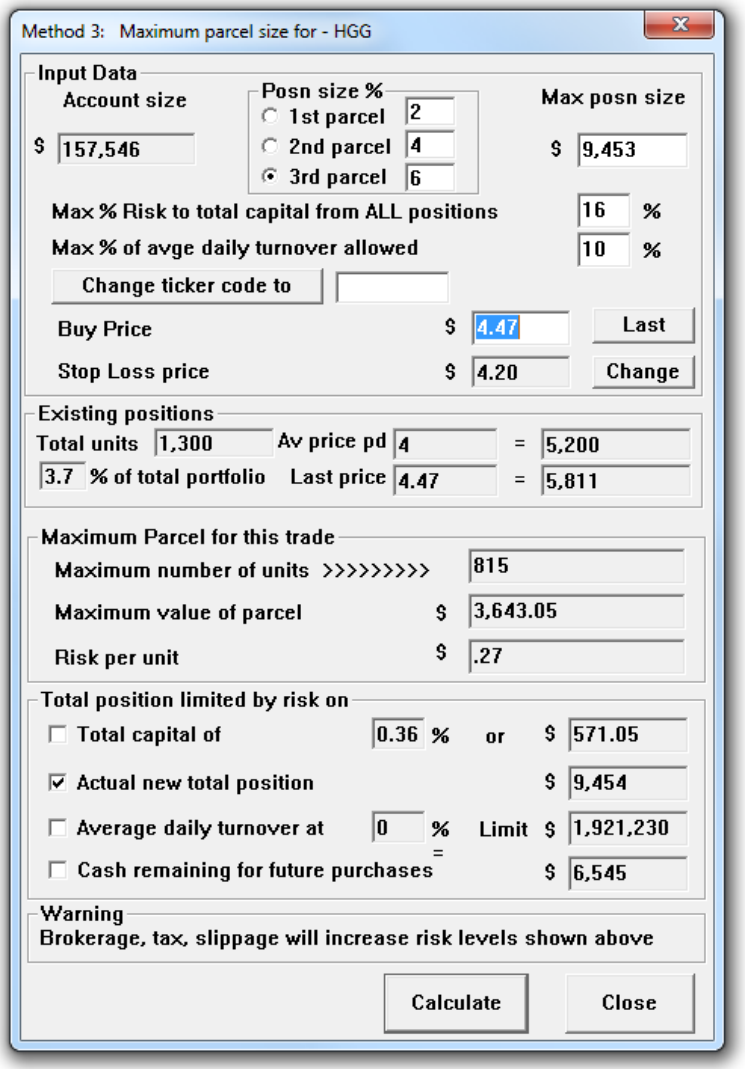

Method 3: Maximum parcel size for - HGG
Input Data
Account size
$ 157,546
Posn size %
1st parcel 2
2nd parcel 4
3rd parcel 6
Max posn size
$ 9,453
Max % Risk to total capital from ALL positions 16 %
Max % of avge daily turnover allowed 10 %
Change ticker code to
Buy Price $ 4.47 Last
Stop Loss price $ 4.20 Change
Existing positions
Total units 1,300 Av price pd 4 = 5,200
3.7 % of total portfolio Last price 4.47 = 5,811
Maximum Parcel for this trade
Maximum number of units >>>>>>>>> 815
Maximum value of parcel $ 3,643.05
Risk per unit $ .27
Total position limited by risk on
Total capital of 0.36 % or $ 571.05
Actual new total position $ 9,454
Average daily turnover at 0 % Limit $ 1,921,230
Cash remaining for future purchases $ 6,545
Warning
Brokerage, tax, slippage will increase risk levels shown above
Calculate
Close

Fig 10.15

To further limit your risk you cap the size of any one position to a given percentage of your total portfolio then enter this percentage value in the **Posn size %** boxes. Colin Nicholson suggests building a position in three stages and the maximum size of your total position in any one security at these stages for the 1st, 2nd and 3rd parcels are suggested as 2%, 4% and 6% of your total portfolio value. Leave these at their default values or change as required. Clicking on any one of these parcels will place the respective dollar figure limit in the **Max posn size** box. This figure can be overridden by directly typing a different dollar figure in this box. Leaving this box blank will cause this additional limitation to be bypassed.

If the ticker code shown is not the one you require then enter it in the box provided and press the button **Change security code**. Finally a value for the applicable **Buy price** needs to be specified in the box indicated.

If you already hold parcels of this security the Risk Calculator summarises these in the **Existing positions** box and takes these previous parcels into account in the calculation of the maximum number of additional shares that can be purchased while maintaining the total risk for each security to be kept below the specified level.

Click the **Calculate** button (or hit the **ENTER** key) to obtain a display of **Maximum number of units**, **Maximum value of parcel**, **Risk per unit**

Under Total position at the bottom of the dialog a tick will appear against the option that has been responsible for limiting the trade either (i) risk on total capital shown as a % or $ value (ii) risk from maximum position size (iii) risk from average daily turnover (iv) the remaining cash. In the options that are not limiting relevant values will be shown and the limiting option will display its maximum.

If you wish to use, as a possible rough indication of the buy price, the last (close) price recorded in your database, then click **Last** (or press **Alt L**) to perform the calculation. To change the stop loss price at any time you can press the **Change stop price** button.

For those holdings that increase in price it is common to raise your stop price when this becomes appropriate. This will reduce the value of the stop loss for the security in question in the **Stop loss** column of the list in the portfolio summary main window. In fact the stop loss can be reduced to such a degree that it becomes negative. The implication of this is that if your stop is activated and you exit the trade at the stop price using your default broker then you will receive a profit on that trade. As stops are raised progressively on each security the **Total stop loss** value for the whole portfolio, displayed in dollars and as a percentage on the main window, will decrease.

Company fundamentals, ratios and notepad

You can get a listing of the basic fundamental values for a company by selecting its security in the list on the main portfolio window and clicking toolbar button number 9. This will bring up the F2 notepad that you are familiar with from charting. You can also edit your notes from this box.

The common fundamental ratios on the other hand can be accessed from toolbar button number 10.

Backing up your portfolio

It is sensible to maintain backups of your portfolio at regular intervals during the entry of its transactions as entry of a portfolio can involve you in many hours of work. Like any backup you should retain on external media such as floppy disks or CD's a grandfather, father, son rotational sequence of backups so at any time you have at least three backups to fall back on. It is sensible to retain frequent backups at least of your whole WORKING folder and its subfolders, one of which includes your portfolio manager files.

For a much more limited but very quick "back up" you can create a backup copy of the portfolio on which you are currently working by selecting from the **File** submenu the option **Backup portfolio**. If you have a portfolio currently loaded with a file name such as "My Portfolio.pfl" a backup with a name somewhere in the range "My Portfolio_BAK_1.PFL" to "My Portfolio_BAK_9.PFL" will be created in the same folder as "My Portfolio.pfl" depending on the name of the last one saved. A maximum of a total of 9 saved backups for each portfolio can be stored at any one time. Further backups will cycle to overwrite and reuse these names.

Wrapping Two or More Portfolios into One

Sometimes it is convenient to be able to monitor a single combined portfolio rather than trying to keep track of several individual ones simultaneously. To do this you can accumulate several portfolios by "wrapping" two or more into a single portfolio without affecting the individual components.

First load the component portfolio that you wish to be the master portfolio in the sense that it will determine the default broker, default account and tax rates. Then from the main portfolio menu choose **File/Wrap portfolios** and select the individual portfolios that you want in the wrap including the one that is currently loaded. Then give it a name like **Jim&Jean** to indicate its components and click the **Wrap** button. A wrap file (.wrp) will be created listing the portfolios to be included.

To load the Portfolio Wrap go to **File/Open portfolio wrap** and select the wrap file you require from the list. It will take a little time to load as each of its components is merged into the master. The combined portfolio will then be saved to disk as **Jim&Jean_wrap.pfl** and loaded into memory.

When next you want to load the wrapped portfolio you can directly load **Jim&Jean_wrap** from **File/Open Portfolio** as for any normal portfolio. This will be faster than loading the wrap **Jim&Jean** from **File/Open portfolio wrap** because all individual components would have to be merged again in the latter process. However, the wrap will not have been updated if you have changed any of the individual portfolio components in the meantime and therefore you should open the wrap from **File/Open Portfolio** only if you have not changed any of the components since it was created.

You should only add and edit transactions from the individual component portfolios rather than from the merged wrap portfolio. Although it is possible to successfully add and edit transactions from the latter, this combined portfolio is only a temporary file and will be overwritten next time the wrap is reconstructed by merging its components.

Creating a reference file for charting and systems testing

You can create a reference file of your portfolio stocks that can be used for automatically generating arrangements of charts or used as a reference file for generating chart arrangements, autorunning or systems filtering in the other parts of the Insight Trader program. From the main menu choose **File/Create reference file** and a list file will be generated containing the codes for all the securities in your portfolio.

Passwording Portfolios

Each portfolio can be individually passworded by accessing **File/Password portfolio**. If you do decide to password a portfolio you must not forget the password otherwise you will not be able to open it again. When setting or providing the password remember to ensure that CAPS LOCK is off because the password is case sensitive. To remove password protection at any time for a particular portfolio simply set the password again to be empty.

Calculation of Portfolio Growth and Annualised Growth Rate

Portfolio Growth over the specified time range is given in dollars at the top of the main portfolio summary screen. This is the difference in value between the notionally liquified portfolio at the end of the period and its notionally liquified value at the start of the period less the net capital injection over the period. The liquefied values take into account expected selling costs. Portfolio values are total and include cash in accounts so the growth includes realised and paper capital gains (net of charges) as well as dividends and interest. Imputed and other tax credits are included in the liquified value for the portfolio at the end of the period but not for its starting value.

Annualised Portfolio Growth Rate over the specified time range is given as a percentage also at the top of the main portfolio summary screen. A daily compounding fixed interest model is used and a daily compounding rate is first calculated that would provide the same total growth over the same period for the same time pattern of capital injection as the portfolio itself has experienced. The first capital injection is the notional liquified value of the portfolio at the start of the period and there are four other account transactions - **Capital Deposit**, **Capital Withdrawal**, **Other Income** and **Income Tax** that are always taken as providing the only capital transactions in and out of the portfolio. The only exception is that all transactions into and out of the <no account> account are considered capital transactions as this account is not included as part of the portfolio. All other account transactions are assumed internal in that they are used only for income and expenses and transfers that relate to the investment. Once the daily compounding rate is calculated the Annualised Growth Rate for a year is calculated as the cumulative percentage by which a single deposit would grow over a full year if compounded at this daily rate.

Portfolio and securities growth rates are, by necessity, calculated via an iterative procedure. Occasionally the solution will not converge and in such cases the figures for these growth rates will not be available and will be displayed as **n/a**.

Securities Growth is calculated similarly to the Portfolio Growth but is restricted to growth generated by the securities alone. It is the net liquified value of the securities at the end of the period less the net liquified value at the start less the net capital injected into securities including fees**.** It also includes the total dividends including imputation and other tax credits. **Securities Growth Rate** is calculated in the same way as for the total Portfolio except that only capital entering and leaving the body of securities eg purchases, sales etc is considered to generate the Securities Growth.

Charting Directly from Portfolio Manager

You can chart directly from the Portfolio Manager by ticking the menu item **Format/Chart current ticker in charting window** (or clicking the corresponding button on the toolbar) when the portfolio window will be reduced in size and positioned to the left. Whenever you single click one of the securities in the main portfolio summary list that security will be charted unadjusted in the main charting window. In this mode it is possible to fully access the charting module functions while you still have the portfolio open. You can if you wish resize the portfolio and charting windows to arrange them side by side.

To return to normal portfolio mode just untick the menu item above or click the cross in the upper righthand corner of the Portfolio Manager main window.

Charting Key Performance Indicators of your own Portfolio

Generating Equity Curves and other Key Performance Indicators

You can chart on a daily basis 19 key performance measures (including equity curves) for your own portfolio to continuously monitor its performance and compare it with that of the overall market. You can chart:

Total portfolio value

Total value of equities

Cash Balance

Holding Cost

Total Capital Gains realised + realisable in date range specified.

Interest

Income from Dividends etc

Total profit for the period (for tax purposes)

Growth in total portfolio

Growth from securities alone

Annualised Growth Rate for total portfolio from period start date

Annualised Growth Rate for securities alone from period start date

Capital flow into the whole portfolio

Capital flow into securities alone

Month on Month Annualised Growth Rate for total portfolio

Month on Month Annualised Growth Rate for securities alone

Percentage of the total portfolio value in the market

Percentage cumulative portfolio growth

Total capital gain accumulated over the date range specified

The first step is to set the date range over which you wish to calculate the performance of your portfolio. Choose carefully as the calculation may take up to an hour or so to complete.

Make sure that the end date is no later than the last date for which your database was updated so that you are not calculating for days for which there is no data.

After this click on the button **Accept dates**.

Then click on the menu item **Reports/Chart portfolio performance**.

If you have previously performed a calculation for this portfolio from the same starting date there will already be a file in existence and you will be asked whether you wish to append to it rather than starting the whole process from scratch. If you answer yes you will be able to refresh from a date that you specify or if you leave the date field blank then the last seven trading days in the file will be removed and calculation continued from there. This is very much faster than recalculating the whole curve again from scratch.

After indicating your choices the calculation will proceed and a file will be produced with a name of the following form:

"Equity for [*portfolioname*] from 010714"

Return to the charting module by clicking the second last toolbar button.

Dealing with Old and Reused Codes

Before you can create meaningful charts of the various performance indicators above you need to ensure that all security data files relevant to your portfolio are in your database including any files that may have changed their codes or have become delisted since you first owned them. You will be alerted to any missing files as soon as you attempt to create the data files for the portfolio itself and you will be given the opportunity to restore them to your database before calculation begins.

You may find that these files have been moved to the OLDFILES folder from where you can restore them to their original locations. Make sure, however, that if you subscribe to Database Manager that you have also unticked the options 1) Delete old codes from database after merging and 2) Remove delisted companies from the Database Manager configuration dialog otherwise these files will be removed again to the OLDFILES folder the next time that Database Manager is run.

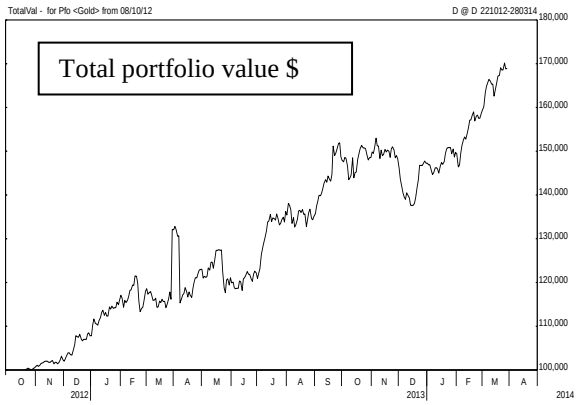
Where the ASX sometimes reuses a previously delisted code, say XYZ, we employ a convention of renaming the old file to Z1-XYZ. If your portfolio contains such a security with a code that has subsequently been reused, then you should ensure the old file Z1-XYZ is installed in the database and that any references to this security in your portfolio are renamed. To change the name and code you should access the button to the right of **Ticker symbol** in the Security Transaction form. Just type in the new code Z1-XYZ and any previous security transactions in the portfolio involving the old code will have their code changed to the new ticker.

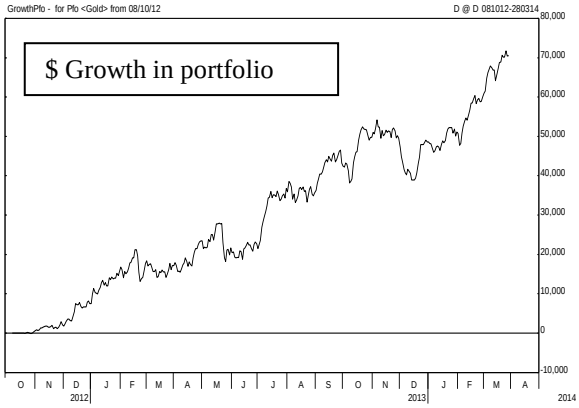
Charting the Equity Curve

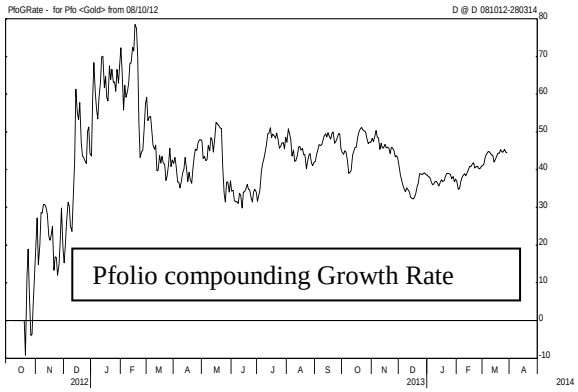
If you simply load and chart the above file then you will see the total portfolio value, your equity curve, as a function of time.

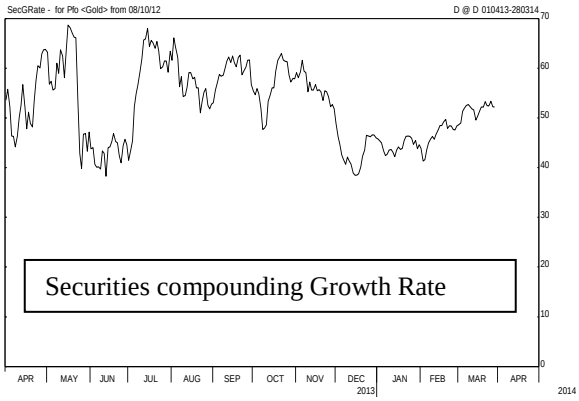
To load and chart this file you could press the **+/=** key or click the second toolbar button, click the **Pfolio equity** button and this will bring up all files relating to portfolio performance charts. Double click the one you need and this will chart the default performance indicator - TotalVal - which is the equity curve for your portfolio.

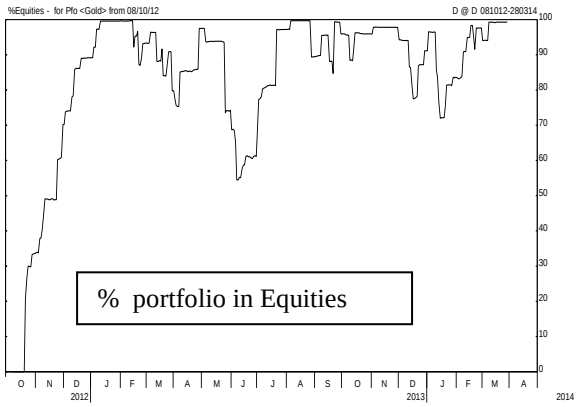
The file for your portfolio performance indicators utilises the ability of Insight Trader to provide up to 20 fields in each file rather than just the usual 6 or 7 of Date,O,H,L,C,V,I. To access these additional data fields you will need to specifically tell the program which indicator it is that you wish to chart in any particular window.

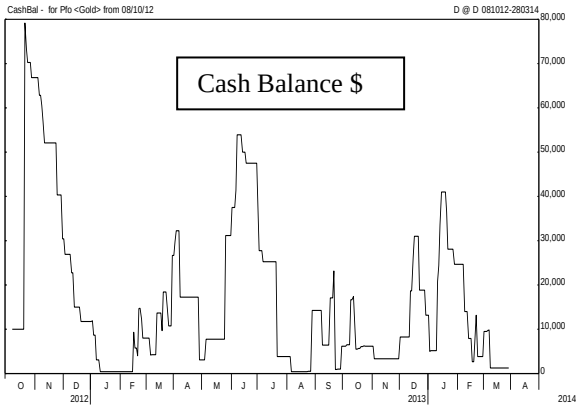

TotalVal - for Pfo <Gold> from 08/10/12
D @ D 221012-280314
Total portfolio value $

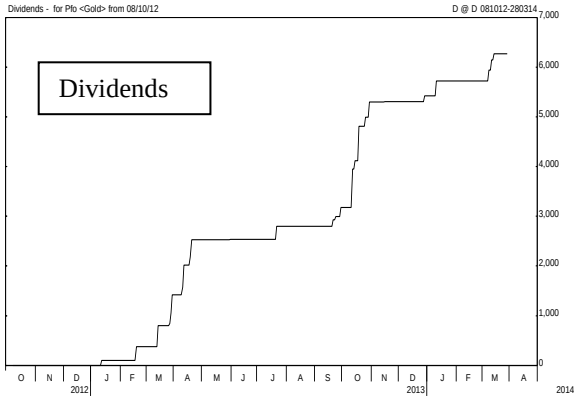

GrowthPfo - for Pfo <Gold> from 08/10/12
D @ D 081012-280314
$ Growth in portfolio


PfoGRate - for Pfo <Gold> from 08/10/12
D @ D 081012-280314
Pfolio compounding Growth Rate


SecGRate - for Pfo <Gold> from 08/10/12
D @ D 010413-280314
Securities compounding Growth Rate


%Equities - for Pfo <Gold> from 08/10/12
D @ D 081012-280314
% portfolio in Equities


CashBal - for Pfo <Gold> from 08/10/12
D @ D 081012-280314
Cash Balance $


Dividends - for Pfo <Gold> from 08/10/12
D @ D 081012-280314
Dividends

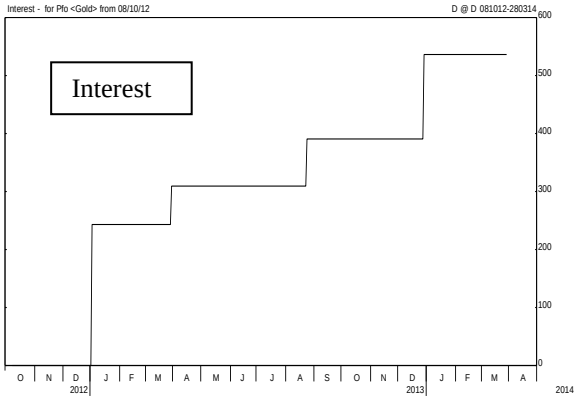

Interest - for Pfo <Gold> from 08/10/12
D @ D 081012-280314
Interest

Fig 10.16

To chart any of the other 18 indicators you will need to go to the main menu and click **View/Chart specs** (or **Ctrl Alt F**). The dialog box will display a total of twenty numbered fields with number 2 – TotalVal, or total value, being the default. Choose another indicator such as 6 – TotalCG, or total capital gain, by replacing the number 2 with number 6 in the second box then click OK and OK again to accept the second dialog box.

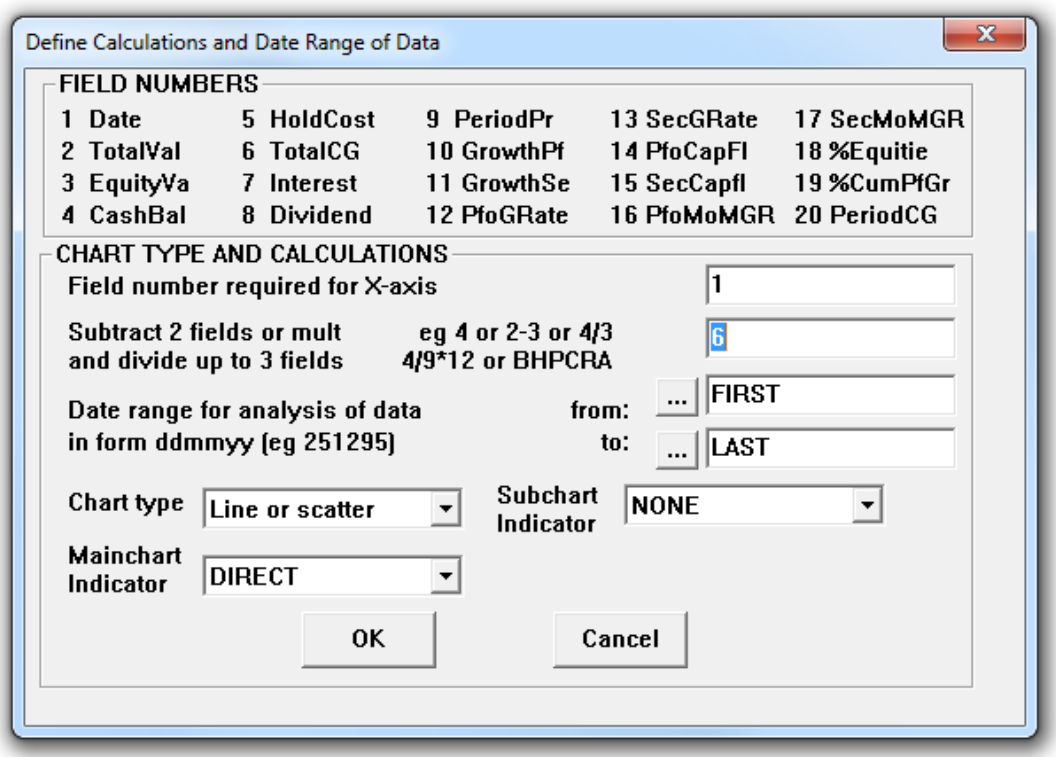


Fig 10.17

To make a chart arrangement of all the indicators on screen at the same time you can, by repeated use of the +/= key, first create 19 identical charts with the default TotalVal field displayed. Then click on each chart in turn to make it active and replace the field value 2 with field values 3 to 20 as described above. When you have created this chart arrangement save it for future reference by pressing **Ctrl S** or the Save arrangement of charts button on the main toolbar.

Monitoring the Performance of your Portfolio against Benchmarks

The top line of the Portfolio Manager Summary screen allows you to monitor the overall performance of your portfolio covering the period of the date range as specified by the Start date and End date.

You have two display options for this top line either (i) Growth Rates or (ii) Cumulative Growth compared with Targets and Benchmarks. These options are toggled by clicking the *GrowthRates/Benchmarks* button on the Summary screen. All figures have been adjusted for any capital inflows and outflows and all growth rates are expressed as compounding values.

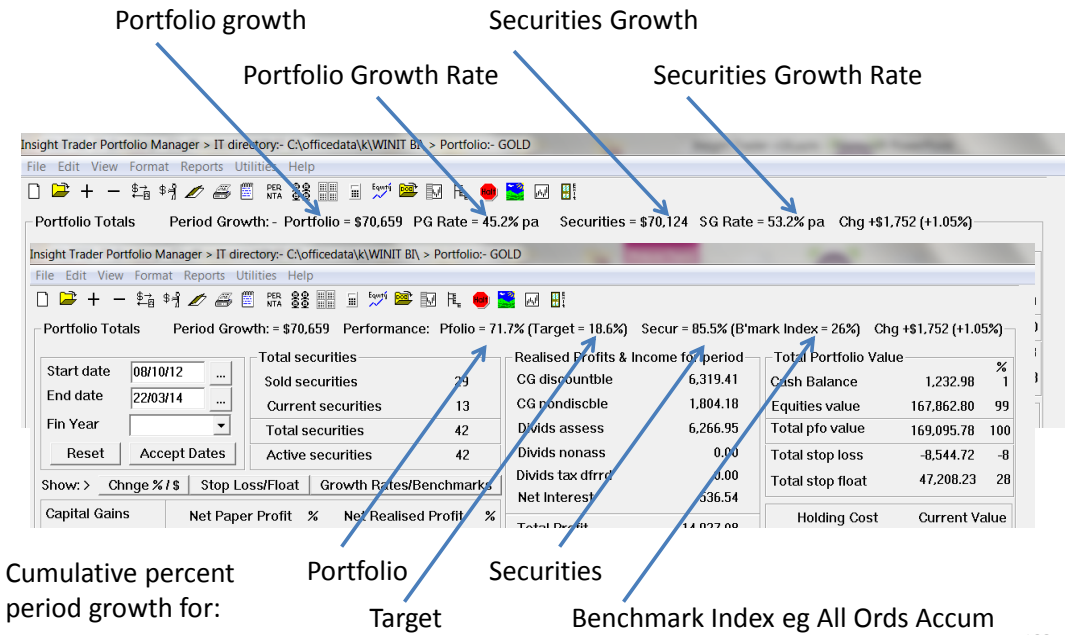


Fig 10.18

Growth Rates

With this first option you are shown the Period $ Growth in the total Portfolio [**Portfolio** =] and its corresponding average annualised compounding Growth Rate [**PG Rate** =]. Further along is the Period Growth in Securities alone [**Securities** =] and its corresponding average annualised compounding Growth Rate [**SG Rate** =].

The difference between the Securities figures and the Portfolio figures is that the Securities values are calculated excluding consideration of any cash while the Portfolio values include any cash as an integral part of the total portfolio.

Cumulative Growth Performance monitored against Benchmarks

The menu item "Format/Set Performance Benchmarks" in the Portfolio Manager allows you to set a Benchmark Index such as the All Ordinaries Index (or the All Ordinaries Accumulation Index) or whatever security code that you wish to compare your portfolio's performance against as well as a Target Growth Rate (compounding) against which you can compare your portfolio's performance. The default Benchmark Index is "XAO" and the default Target Growth Rate is 12% pa compounding.

This option allows you to compare the cumulative performances over the current date range of both your total Portfolio and the Securities alone against the cumulative growth that would be expected from the Target growth rate you have specified and also what your Benchmark index has achieved over the same period.

The figures for cumulative growth shown from left to right are the portfolio $ period growth [**Period Growth** =] and the portfolio percentage cumulative growth performance compared with the Target cumulative growth [**Portfolio = (Target =)**]. Then comes the percentage cumulative growth for the securities alone compared with that of the Benchmark Index [**Secur = (B'Mark Index =)**]

The figures for the securities alone is particularly useful if you wish to compare the cumulative percentage growth of the particular securities you have chosen with the cumulative percentage growth of the broad market index that you are using as a benchmark. For example, if the cumulative percentage growth of your securities is say 40% and that for your benchmark index is 20% then you know that you have picked stocks that on average are outperforming the index by a factor of 2.

This information is particularly valuable at the start of a bull market when there is a large percentage of the portfolio in cash and you wish to know how well the stocks that you have chosen are performing relative to the average for the broader market.

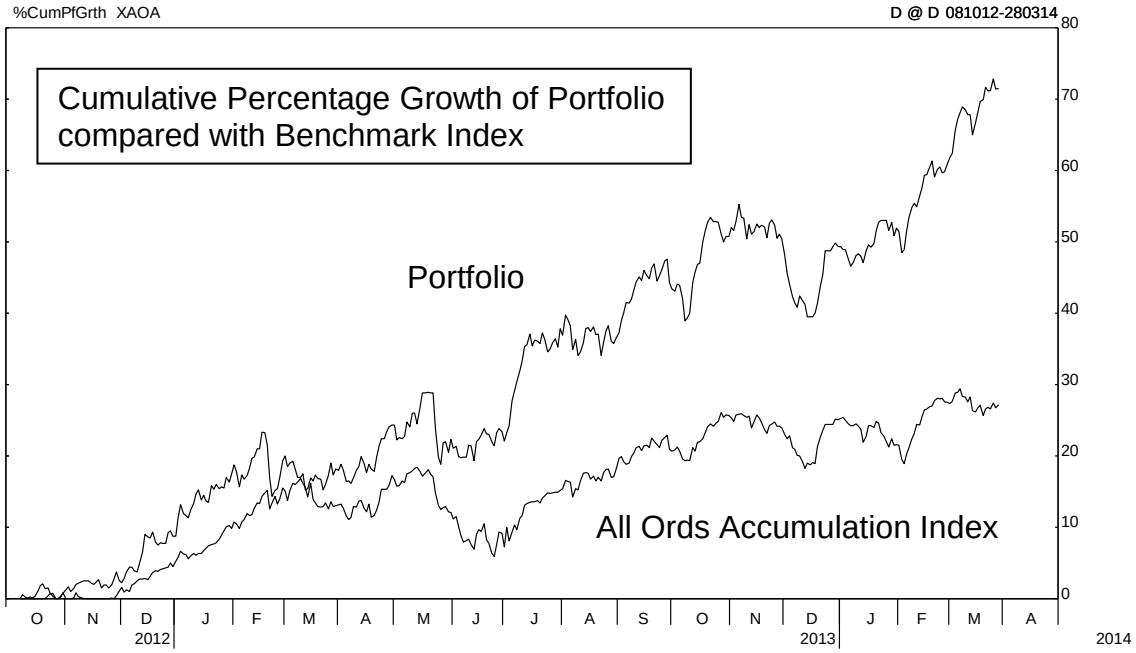


Fig 10.18

Daily Change in Portfolio Value

At the end of the top line of the Portfolio Summary screen showing Portfolio Totals in both of the above options is displayed the change in the total value of the portfolio holdings at the portfolio end date from the total value of the same holdings the day before the end date expressed as both $ values as well as the same total change expressed as a % of total portfolio value.

In the case where stocks are bought or sold on the portfolio end date the change is calculated as though those transactions had been carried out at a price equivalent to that of the close of the day before. Since the change is calculated on the change in values of the holdings rather than their liquefied values then any change in the notional selling costs resulting from changes in value are not included. If required the liquefied value change from the day before can be obtained from the equity curve chart for that portfolio.

The Significance of Annualised Growth Rate

One of the most important of the key performance indicators of your portfolio is the Annualised Growth Rate figure. It is essential that you are aware of why it is so important and how you can make use of it.

The advantage of measuring Annualised Growth Rate is that it allows us to compare rigorously the performances of different investments over different periods of time in situations where there may be radically different patterns of dynamic flow of capital into and out of those individual investments.

People sometimes wonder what an Annualised Growth Rate of R% pa for our portfolio actually means. The answer is that we simply compare the performance of our own portfolio at the end of a given period of time, say three months, against that of a notional fixed interest investment (over the same period) that compounds daily and that would, if allowed to continue for one whole year, have given us at the end of that year a final return of R% on a fixed sum invested at the start.

The Annualised Growth Rate for your portfolio is calculated to be the Annualised Growth Rate that would be required in a daily compounding fixed interest investment - subjected to the same regime of capital inflow and outflow as that experienced by your own portfolio - to provide the same return as your portfolio has done over the same period of time.

Transaction Codes used for Acquisition and Disposal

ACQUISITION		**DISPOSAL**	
P	Purchase		
D	Dividend Reinvestment		
F	From exercised options	**X**	Exercised options
N	Name change acquisition	**T**	Ticker change disposal
M	Merger acquisition	**E**	Exchanged for merger securities
O	Offspring from demerger	**U**	Unwind from parent in demerger
		S	Sale

Exiting the Portfolio Manager

The last button on the toolbar will exit completely from Insight Trader. The second last button on the other hand will hide the Portfolio Manager and return you to the main charting window. The third last button will allow you to change to another database in a new directory.

Chapter 11

Documents Management System

Overview

Insight Trader has its own integrated, comprehensive documents management system for storage and retrieval of electronic documents related to your investment activities. You can easily store and automatically access files such as Word Processing and PDF documents, spreadsheet files, emails, shortcuts, links to webpages and image files of scanned paper documents. In fact you can store any type of file that you require.

This facility provides you with a convenient, single repository for such things as Holding statements and Buy and Sell contracts notes that have been emailed to you by your broker, downloaded by you or scanned in from paper documents in your possession. Your bank statements can also be placed in their own specific storage area for each bank account. You can even include such things as links to relevant websites, broker recommendations and newsletters. Another example might be legal documentation relevant to a Superannuation Fund that can be scanned in and the file dropped on to the portfolio manager window for storage and easy access. In this way you can organize all documentation relating to your investment activities in the one convenient and easily accessible location.

Storage and Retrieval

To store one or more document files you can simply drag and drop them on to the F2 notepad, appropriate areas of the Main Portfolio Manager window, or on to the Accounts Transaction dialog for instant storage in relevant categories. The documents so stored are easily accessed by clicking the Docs button on any of these three windows and the files are instantly available for viewing or editing.

It may be convenient to first copy the files you wish to store on to the Desktop (rather than from Windows Explorer or My Computer), then reduce the size of the Insight Trader windows to expose the desktop, before dragging them on to the appropriate Insight Trader dialog box. If you hold the Ctrl key down while dragging then you will copy the file rather than move it.

Alternatively, you can also click any of the Docs buttons to open the relevant folder and then drag or copy and paste these files directly into the storage area. This second method should be used if you wish to drag emails, or attachments to emails, directly from your email program (rather than first copying them to the desktop) or if you wish to drag with the right mouse button to create shortcuts to the file rather than moving or copying the file itself.

Moreover, whenever you first access a particular storage area by dropping a file on to a window, a Word document file will also be automatically generated and appropriately named ready for you to enter notes etc. If you have not yet stored any documents in this location and you press the Docs button you will be asked if you want to create such a Word document file for that security, portfolio or bank account. These Word documents can be used, for example,

as a trading diary or to enter notes on a particular stock and can be illustrated with screen grabs or emf charts that you generate from within Insight Trader. The possibilities are limitless.

Where are the files actually stored

Although the actual storage areas on the hard drive are transparent to the user these are in fact maintained in a system of subfolders off the DOCUMENTS folder under the WORKING subfolder of the main WINIT program folder.

There are separate storage areas for any security such as say BHP (i) in the charting section of the program that is accessed through the F2 notepad and (ii) in each of your portfolios that might contain BHP as a code and that are accessed through the main Portfolio Summary window. In addition each portfolio itself has a separate general storage area.

Also each bank account has its own separate repository that is accessed through the Account Transactions dialog.

Schemes for Further Organisation

If you wish you can further organize your work by pressing the Docs button and then create new subfolders for specific purposes within the area revealed. You can then rearrange your files by dragging and dropping into these custom subfolders. You might for example wish to create subfolders, within the area for a specific bank account, into which you can drop files relating to statements from previous financial years for archiving purposes.

One scheme might be to place general stock information such as broker reports etc into the F2 storage area. The portfolio storage area for specific securities that you actually hold would be used for contract notes, dividend statements, notes on reasons for entry and exit, portfolio reports and so on. General information on a particular portfolio would go in the general area for each particular portfolio. Bank statements would be stored under the accounts storage area. If you are a very active trader then in the relevant portfolio section for any particular security you could create subfolders for different financial years (or whatever other form of categorisation you wish to use) into which documents could be archived.

This provides a comprehensive yet very simple, flexible and convenient documents management system that is easily maintained and accessed.

Storage and Retrieval of Documents

On the Main Charting Window

The first document repository within the program is accessed with the DOCS button on the main toolbar. It is for general investment documents not necessarily associated with either specific codes or specific portfolios or specific bank accounts. Just drop any file on to the main Insight Trader program window to store it. The DOCS button on the toolbar will allow you to retrieve it.

On the F2 Notepad

This is the storage area for individual securities within the charting module of the program and is applicable to any security whether you already own it or not. For example if a stock is on your watch list you might wish to keep notes on it and store reference material prior to purchase. This is the place to do so.

Drag and drop one or more files, from the desktop or Windows Explorer, anywhere on to the F2 Notepad and retrieve and open these files from the Docs button on the F2 Notepad. A Word doc file will also be created automatically for that security on the first drop. If the Docs button is clicked before any files have yet been dropped for that security then you will be asked if you want to create a Word doc file for that security.

The F2 Notepad itself can also still be used for entering notes for specific purposes as it has the advantage of speed in that it is instantly available and does not require any additional Word application software to load.

On the Main Portfolio Summary Window

Drag and drop files, from the desktop or Windows Explorer, on to the individual rows for each security on the main portfolio summary list and they will be saved in the current portfolio area for that security. Drag and drop files on to the grey display section above and they will be saved under the "general portfolio" area for that portfolio.

To retrieve and open these files for any security highlight the row for the particular security and click the "Doc" toolbar button on the main portfolio toolbar. If no files are currently available it will ask if you wish to create a Word doc file for that security. To access the general portfolio folder, click in a blank row at the bottom of the list (to remove the highlight from the rows) and click the Doc toolbar button.

Note that for any particular security, say ABC, there are separate ABC document folders for each individual portfolio and these are in turn separate from the ABC document folder for the F2 Notepad.

On the Accounts Transactions Dialog

You should first open the Accounts Transaction dialog and then select the specific account of interest (from the drop down list box) into whose area you wish to store your document.

Drag and drop the selected files, from the desktop or Windows Explorer, anywhere on to the Accounts Transactions dialog and they will be saved in the current storage area for that bank account. These documents can be retrieved at a later time for any bank account by selecting that account in the dropdown list on the dialog and clicking the Docs button.

Customising the Word Document Templates

Each time a Word document file is created for your use in the particular storage areas it copies across one of four template files that are stored in your main WINIT folder. You can customise each of these templates so that each time it is copied to a new document you will already have available some standard text that you might always wish to have in such a document to prompt you for input. For example for stocks that you have purchased you might wish to have preset fields such as 1) Date purchased 2) Quantity bought 3) Reason for purchase 4) Target price 5) Date sold 6)Reason for sale 7) General notes etc. Alternatively you might like all templates to be blank containing no preset information at all.

The template files that should be customised can be loaded into Word from the WINIT folder and are named as follows:

Template – security.doc

Template – pfl security.doc

Template – pfl general.doc

Template – account.doc

Encrypting Sensitive Portfolio Document Files

For security of sensitive portfolio document files such as scanned bank statements you can easily encrypt these as they are being dropped on to the Account Transaction dialog. It is necessary that WinZip be installed in the 'Program Files' folder along with its "commandline addon". These applications can be downloaded from 'www.winzip.com' for about $40. Tick the relevant checkbox in the Format/Preferences dialog of Insight Trader to enable this feature and configure it as on. It may also be temporarily enabled and disabled for the duration of a session from the Format menu of the portfolio manager window.

Drag and drop files directly on to the Account Transaction dialog itself when you will be asked for the name of an existing or a new WinZip file to which to add it. You will be prompted to supply a password for the encryption for each file dropped.

The other dialog for which documents can be encrypted is the main portfolio dialog when files can be dropped on to individual securities. This allows you to encrypt contract notes and other documents relevant to your trading of those individual securities.

Should you wish to encrypt many files at the same time using the same password then click the Docs button and then select all files required from the source folder and drag and drop them all together on to the appropriate Zip file.

To retrieve an encrypted document click the docs button on the Account Transaction dialog or the main portfolio dialog and double click the zip file that contains the required document. Then double click the document and enter your password when requested.

It can be a useful form of organisation to create a separate zip file for each financial year.

READING LIST

The following books provide information on the subject of technical analysis and trading strategy.

1. John J. Murphy, *Technical Analysis of the Futures Markets. A comprehensive guide to trading methods and applications.* New York Institute of Finance, New York, 1986.
2. Robert D. Edwards and John Magee, *Technical Analysis of Stock Trends*, 5th Ed, John Magee Inc., Boston, 1966.
3. Perry J. Kaufman, *Commodity Trading Systems and Methods*, John Wiley and Sons, New York, 1978.
4. Jacob Bernstein, *The Handbook of Commodity Cycles - a window on time*, John Wiley and Sons, New York, 1982.
5. Richard J. Teweles, Charles V. Harlow and Herbert L. Stone, *The Commodity Futures Games - who wins? who loses? why?*, McGraw-Hill, New York, 1977.
6. Jacob Bernstein, *The Investors Quotient - the psychology of successful investing in commodities and stocks*, John Wiley and Sons, New York, 1980.
7. Ivan Krastins, *Listen to the Market - Your Personal Guide to Technical Analysis*, McGraw-Hill, Sydney, 1992.
8. R W Colby and T A Meyers, *Encyclopaedia of Technical Market Indicators*, Dow Jones-Irwin, Homewood Illinois, 1988.
9. Stan Weinstein, *Secrets for Profiting in Bull and Bear Markets*, Irwin, Chicago, 1998
10. James A. Hyerczyk, *Pattern Price and Time*, John Wiley and Sons, New York, 1998
11. Alan Hull, *Active Investing – a Complete Answer*, Wrightbooks, Sydney, 2001
12. Alexander Elder, *Trading for a Living*, John Wiley & Sons, New York,1993
13. Alexander Elder, *Come into my Trading Room*, John Wiley & Sons, New York, 2002
14. Colin Nicholson, *Building Wealth in the Stockmarket*, Wiley, Melbourne, 2009
15. Colin Nicholson, *Think like the Great Investors*, Wiley, Melbourne, 2013
16. Colin Nicholson, *Hot Stocks*, Wilkinson Publishing Pty Ltd, Melbourne, 2007

Speed Keys

CONTROL SPEEDKEYS

Ctrl A	Multple Moving Averages
Ctrl+Shft+A	Generate chart arrangement
Ctrl B	Bollinger Bands
Ctrl C	CYCLES mode
Ctrl D	Divergence
Ctrl E	Envelope of MAs
Ctrl F	Fans
Ctrl G	ReGression toggle
Ctrl H	Hide main chart lines
Ctrl+Shft+H	Hide Alarms
Ctrl I	Line Linear Regression
Ctrl J	Moving data box
Ctrl K	LocK display DWM
Ctrl L	LINES mode
Ctrl M	Chandelier Exit
Ctrl N	Substitute New security
Ctrl O	ParabOlic SAR
Ctrl P	Print charts
Ctrl+Shft P	Generate metafiles
Ctrl Q	Quit chart edit mode
Ctrl R	Retracements
Ctrl S	Save chart(s)
Ctrl T	TEXT mode
Ctrl U	Scaffold Exit
Ctrl V	Reserved
Ctrl W	Zoom bracketed time
Ctrl X	X Projections
Ctrl Y	Y Projections
Ctrl Z	Remove MA Boll Para - Remove Regress Ratio - Remove Rebase
Ctrl+Shft+?	Toggle alarm to be last price on the chart/in the file

FUNCTION SPEEDKEYS

F1	Context Help menus
F2	Notes on security
F3	Zoom out central +Ctrl - Zoom out total
F4	Zoom in central
F5	Zoom out from right
F6	Zoom in to right + - Zoom in total
F7	Scroll Left 1 d +Shft - Scroll Left 7 d +Ctrl - Scroll Left 30 d
F8	Scroll Right 1 d +Shft - Scroll Right 7 d +Ctrl - Scroll Right 30 d
F9	Resume slideshow +Ctrl - Resume autorun
F10	reserved by Windows
F11	Indicator menu
F12	Last data +Ctrl - Extnded Last data
PgUp	Page Left
PgDn	Page Right
Home	Page to beginning
End	Page to end
00 - 99	Event grid
R arrow	Activate next chart
L arrow	Activate previous chart
Up arrow	Maximise chart
Dn arrow	Restore chart

ALPHA SPEEDKEYS

A	1 Moving Average
B	bar chart
C	candlesticks
D	daily
	+Shift Compress Daily
E	equivolume
F	log/linear toggle
G	grid toggle
H	hide/show splits
I	Indicators
J	Pivot points
K	compress status
L	line chart
M	monthly
	+Shift compress Monthly
N	New File
O	overlay
P	point && figure
Q	equicandles
R	Reversals
S	volume log toggle
T	Time constants
U	Gann swing charts
V	volume chart toggle
W	weekly
	+Shift compress Weekly
X	set date axis
Y	set vertical axis
Z	lock Y scales
~	extend alarm lines

ALT SPEEDKEYS

Alt A	Save file
Alt B	Blank screen
Alt C	KwickChart
Alt D	Change Directory
Alt E	MENU Edit
Alt F	MENU File
Ctrl+Alt F	Chart specs (First Form)
Alt G	Enter Chart edit mode
Alt H	MENU Help
Alt I	Edit vIew records
Alt J	Highlight list
Alt K	Data file management
Alt L	Load security to chart
Alt M	MENU ForMat
Alt N	MENU RuNslides
Alt O	Preferences
Alt P	MENU Portfolio
Ctrl+Alt P	Load Portfolio
Alt Q	Show default template
Alt R	Replay saved charts
Alt S	MENU Systems
Alt T	Time constants
Alt U	MENU Utilities
Alt V	MENU View
Alt W	MENU Windows
Alt X	Exit program
Alt Y	Load system
Alt Z	reserved
Alt 1-0	Zoom years 1-10
Ctrl+Alt 1-0	Zoom months 1-10

Specialized Mouse Operations

Front Screen

Left Click chart	–	Invoke Chart Edit Screen
Right Click chart	–	Invoke Floating Toolbar
Ctrl Left Click chart	–	Add code to WATCHLIST
Shft Left Click chart	–	Remove code from WATCHLIST
Ctrl+Shft Left Click chart	–	Reset WATCHLIST

Chart Edit Screen

On main chart

Left Click	–	Commence drawing trendline
Right Click	–	Invoke Floating Toolbar
Ctrl Left Click	–	Add code to WATCHLIST (other keys as above)

Just to left of vertical axis

Ctrl Left Click	–	Set Alarm Below rounded to ASX rules
Shft Left Click	–	Set Alarm Above rounded to ASX rules
Ctrl Right Click	–	Delete Alarm
Drag alarm with no key	–	Move alarm and round to 0.01
Drag alarm with Shft key	–	Move alarm and round to 0.1
Drag alarm with Ctrl key	–	Move alarm and round to 1
Drag alarm with Shft+Ctrl	–	Move alarm and round to 0.5

Just to right of vertical axis

Left Click or drag	–	Reposition top of subcharts
Right Click	–	Remove adjacent indicator

Text (on top left corner) or Lines, Fans, Circles etc (on handles)

Right Click	–	Edit
Shft Right Click	–	Spawn (a line)
Ctrl Right Click	–	Delete
Drag	–	Move

Mousewheel Button

Click	–	Toggle fast/slow data scroll within a chart
Double Click	–	Toggle scrolling within chart/rotating active chart

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